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The purpose of the REVIEW is to report the major research findings during a designated period, organized by areas of interest. The REVIEW identifies the significant studies, summarizes them, and, within limitations of space, critically analyzes them. It seeks to present syntheses of research findings which reflect educational insight and stimulate new research.

The more active fields of educational research are reviewed every three years; the less active fields are included in alternate cycles. (See inside back cover.)

Each issue is organized by a committee of AERA members, specialists in the issue's topic, who work under the leadership of a chairman chosen by the editor with the advice of the Editorial Board. The chairman develops the plan for the issue with the advice of his committee and the editor, and, with their aid, invites specialists to contribute chapters. Contributors are chosen for their particular competency.



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Language Arts and Fine Arts

Reviews the literature for the three-year period since the issuance of
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This issue of the REVIEW was prepared by the Committee
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FOREWORD

This issue of the REVIEW follows the general pattern in the language arts and fine arts cycle by reviewing the research which has appeared since the material covered in the April 1958 issue.

Of the many topics which might deserve attention in this foreword, one seems particularly important. Much of our research in language arts has been conducted by means of short-term, single-variable studies. Research done in this manner provides tantalizing leads to relationships and to instructional procedures, but does not permit us to determine clearly the influence of the development of one language art upon the other. Nor do we know with assurance how instructional procedures in one area of the language arts influence performance in another. Studies which provide information on these problems are difficult to design and carry out, but the importance of their conclusions makes it imperative that such research be done.

The research in language arts during the past three years has moved ahead substantially. Careful design and analysis of experimental studies, plus continued attention to important problems, will bring even greater knowledge.

The chairman expresses his appreciation to members of this committee and to the chapter authors who generously gave time and energy in preparing this issue.

THEODORE CLYMER, *Chairman*
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CHAPTER I

The Psychology of Language

PAUL M. KJELDERGAARD

THE INTERIM since the previous review can be characterized as one of changes for the psychology of language. First, interest in the area has intensified, with a consequent increase in the volume of relevant literature. Second, the structure of the field has shifted somewhat so that certain topics (for example, information theory) which were of prime concern three years ago now play a relatively minor role, whereas other topics (for example, mediated generalization) now command an even larger share of attention.

As a result of the phenomenal growth of the field during the last three years, this review can present only a partial picture of recent developments in the scientific study of language behavior; selection of articles and books to be included has been based on judgment of the importance of the topic and its application to education. Readers may wish to consult the recent review of psycholinguistics by Rubenstein and Aborn (1960).

Theories

Inasmuch as the aim of all science is construction of a systematic framework with which to interrelate and explain observed phenomena, recent developments in theories or models of verbal behavior will be considered first. Most theories of current interest were expounded several years ago and were covered by Carroll in the previous review.

Of the new developments, the electronic computer was seen as the counterpart of the human central nervous system and as such was used to describe language behavior, with emphasis on cognition, by Miller, Galanter, and Pribram (1960). In a similar way, Carroll (1959) used the computer program as a model for describing the acquisition of language. Carroll accepted Skinner's descriptive analysis of language and then related how the environment (for example, parents) and internal elements (for example, the nervous system) determine what verbal responses a child acquires and under what circumstances these responses will be produced—in much the same manner as a computer program dictates what operations the machine will perform with various kinds of input. Brown and Dulaney (1958) proposed a language model similar to Skinner's, incorporating a theory of a meaning as developed by Osgood. The Brown and Dulaney model offers nothing new but is a readable account of language acceptable to many psychologists.

Most of the earlier psychological theories of language focused on the problem of mediated generalization. Mediated generalization is what takes

place when learning in one situation has a facilitation effect on the learning in a second situation, even though there is no direct connection between the elements of the two learning experiences. Such transfer effects are presumably due to a connection between the stimulus elements established via a common response in some prior learning; the common response (or its stimulus properties) is said to mediate the new learning. Schematically, there are:

Prior Learning:

Stimulus A \longrightarrow Response C \longrightarrow (Stimulus consequences of C)
 Stimulus B \longrightarrow Response C \longrightarrow (Stimulus consequences of C)

New Learning:

Stimulus A \longrightarrow (Implicit C) \longrightarrow (Stimulus conseq. of C) \longrightarrow
 Response D
 Stimulus B \longrightarrow (Implicit C) \longrightarrow (Stimulus conseq. of C) \longrightarrow
 Response D

The connection between stimulus B and response D is accomplished, in part, during the A to D learning when the implicit response, C, and its stimulus consequences are connected to responses D.

Mediation theorists can be divided into two groups on the basis of their conceptualization of the mediational mechanism. One group, those postulating representational mediators, place emphasis on the nature of the mediator and describe it as one or more fractional components of the previously learned response together with its neural consequences. The second group, the associative theorists, emphasize the effects of the mediation process and vaguely describe the mediator as if it were simply an implicit response not unlike overt verbalization. The works of Osgood and his associates (see Osgood, Suci, and Tannenbaum, 1957) and Mowrer (1960) are illustrative of the theorists invoking representational mediators. Jenkins, Mink, and Russell (1958) and Bousfield (1959) are among the exponents of associative mediation.

A large body of empirical evidence supports the idea of mediated generalization. Historically, experimentation concerning this problem dates back to the beginning of this century, and modern experimental studies were performed in the early 1930's. The current studies fall into two classes, those utilizing the classical Pavlovian conditioning paradigm and those employing multistage paired-associate learning paradigms. A classical conditioning study by Phillips (1958) demonstrated that the galvanic skin response (GSR) conditioned by pairing a word, the conditioned stimulus (CS), with a loud tone, the unconditioned stimulus (UCS), would generalize to other words related to the CS by prior learning. The previous learning had consisted of relating Turkish words to shades of gray. The magnitude of the generalization effect was an inverse function of the distance between the gray associated with the test word and the gray associated with the CS.

Grice and Davis (1958) conditioned an eyeblink, the unconditioned response (UR), to a tone, CS, using a puff of air, UCS, to elicit the blink. Subjects also made a specific motor response to the CS. Two other tones were paired with motor responses, one response being the same as that made to the CS, the other different. In the test stage, the unconditioned tone which had a motor response in common with the CS produced more eyeblinks than the tone which had been paired with the different motor response. Branca (1957) reported negative findings in an experiment involving electric shock as the UCS, GSR as the UR, and words or pictures as CS's. Only when subjects recognized the relationship between the training stimuli and the test stimuli, and expected shock, was there an increase in GSR. Historically, electric shock has often produced results that are not found with other types of stimuli. In view of the preponderance of positive evidence, these results must be considered an artifact of the experimental situation.

Where paired-associate learning is considered, three basic types of three-stage paradigms may be depicted as follows:

	I	II	III
Stage 1:	$A \longrightarrow B$	$A \longrightarrow B$	$B \longrightarrow A$
Stage 2:	$B \longrightarrow C$	$C \longrightarrow B$	$B \longrightarrow C$
Test Stage:	$A \longrightarrow C$	$A \longrightarrow C$	$A \longrightarrow C$

Type-I paradigms are referred to as response-chaining paradigms; that is, the response of the first stage becomes the stimulus of the second stage, presumably establishing an $A \longrightarrow B \longrightarrow C$ chain. Paradigms of Type II are termed acquired-stimulus equivalence; that is, the stimuli are equated experimentally by pairing them with the same response. Analogously, the Type-III paradigms are called acquired-response equivalence. By interchanging the first two stages of Type-II and Type-III paradigms, four equivalence paradigms are generated. This manipulation, together with inversions of stimulus and response terms, yields four chaining paradigms.

An investigation of all eight paradigms, along with a theoretical analysis of possible mediational mechanisms, was the subject of a monograph by Kjeldergaard and Horton (1960). Seven of the eight paradigms produced significant generalization effects. Cramer and Cofer (1960), using different experimental materials, tested the same paradigms and obtained positive effects in each case. Both sets of authors emphasized the necessity of postulating backward associations (that is, learning $A \longrightarrow B$ simultaneously establishes a $B \longrightarrow A$ connection) in accounting for their results. Norcross and Spiker (1958) obtained positive results with a Type-I paradigm with very young children as subjects. Jeffrey (1957) tested the same paradigm, as well as one of the Type-III paradigms, in each case using a motor response as the C term. Both paradigms produced facilitation in the test stage. Kaplan (1959) reported significant mediational effect with a Type-II paradigm.

Additional References: Cofer (1958); Osgood (1957); Quine (1960).

Research Techniques

A tabulation of responses given in word-association tests, particularly the Kent-Rosanoff list, has been widely used by the association theorists as providing indicators of verbal-habit strength. Habit strength is judged from the normative data in two ways: the more frequently a word is given in response to a particular stimulus word, the stronger the assumed associative bond between the two words (Jenkins, 1959; Deese, 1959); or, the greater the percentage of overlap in the responses to two stimulus words, the stronger the connection between stimuli (Bousfield, Whitmarsh, and Danick, 1958). These measures predict reasonably well such things as facilitation in paired-associate learning (Storms, 1958; Underwood and Schulz, 1960b) or the extent to which words presented in random order tend to be recalled in clusters (Jenkins, Mink, and Russell, 1958).

Attention recently has centered on what variables affect the responses given in word-association tests. Cultural changes, for example, have produced differences in norms collected at various time periods (Jenkins and Russell, 1960). Popular responses are the most stable and have increased in frequency over the years, whereas superordinate responses (for example, chair—furniture) have tended to disappear. Brown and Berko (1960), in a study marred by faulty statistics, found systematic changes in the tendency to give responses that belong to the same form class as the stimulus (for example, adjective to adjective) with increases in age. Context (Cofer and Ford, 1957), prior-association tasks (Maltzman and Simon, 1959), instructions (Maltzman, Bogartz, and Breger, 1958), and judged similarity between stimuli (Cofer, 1957) also affect the type of response in association tasks.

The semantic differential is an adjectival rating scale where subjects rate concepts in terms of closeness to the extremes of bipolar scales (for example, good—bad). Originally developed in connection with Osgood's mediation theory, this instrument has since become a general research tool, widely used and often found very sensitive. Carroll (1960) used the semantic differential, together with other measures, to factor-analyze the styles of a diverse selection of literary passages. Six factors emerged, several of which were defined by semantic-differential scales: general evaluation, personalness, ornamentation, abstractness, seriousness, and narration.

Yavuz and Bousfield (1959) demonstrated that subjects retained the connotative meanings of Turkish words, as measured by the good—bad continuum of the semantic differential, even though they had forgotten the English "translation" learned earlier. Staats, Staats, and Heard (1959) showed in a similar study that the connotative meanings of English words may be changed by paired-associate learning. McMurray (1958) showed that semantic differential ratings of abstract symbols and words were related to judgments by another group of subjects as to which pairs of symbols "best fit" the words.

Measures of associative clustering have also been extended beyond their original area of application so that they are now used on a variety of materials to demonstrate relationships between items. The technique was created by Bousfield and his associates, who have demonstrated that when a list composed of words from several taxonomic categories (for example, professions, animals, and vegetables) is read to a group of subjects in random order, recall by the subjects is not random but organized according to category (Bousfield, Cohen, and Whitmarsh, 1958; Brand and Woods, 1958). Other word relations such as synonymity (Cofer, 1959) or association strength (Jenkins, Mink, and Russell, 1958), as judged from word-association norms, have also been shown to produce clustering.

Bousfield, Berkowitz, and Whitmarsh (1959) reported an interesting study in which subjects were presented with four groups of minimally meaningful designs and asked to reproduce them after each exposure of the series. Successive trials were accompanied by increases in the amount of clustering. Intrusions during the early trials, that is, designs recalled by the subjects which had not been included in the series, tended to belong in one of the categories. Thus, when subjects are given a set of materials to learn, they tend to organize them on some basis, and this organization process may even precede the learning.

Additional References: Jenkins (1960); Jenkins, Russell, and Suci (1958).

Verbal Learning

The related variables, meaningfulness (as measured by the percentage of subjects who report an association to a stimulus or by the mean number of discrete associations given by subjects in a specified period of time) and frequency, have received considerable attention in the last few years. It has been repeatedly shown that meaningfulness affects the rate of paired-associate learning and that the meaningfulness of the response term is more important than the meaningfulness of the stimulus term (Mandler and Campbell, 1957; Cieutat, Stockwell, and Noble, 1958; Jantz and Underwood, 1958; Hunt, 1959). In serial learning, meaningfulness interacts with intertrial interval; the less meaningful the material, the more important it is that practice be distributed (Braun and Heymann, 1958; Underwood and Richardson, 1958; Ellis, 1960). Stimulus position (Vinacke and Smith, 1959) and motivating instructions (Sarason, 1957) also interact with meaningfulness in serial learning.

Frequency of prior exposure to experimental materials, whether controlled experimentally or judged on the basis of word or letter counts of literature, is also related to learning difficulty. Epstein, Rock, and Zuckerman (1960) showed that familiarization facilitates paired-associate learning. Runquist and Freeman (1960) found that discrimination learning (selecting a "correct" word from a series of pairs) is faster after familiarization if the pairs are heterogeneous in meaningfulness, but not if they are homogeneous.

Underwood and Schulz (1960a) skillfully summarized and interrelated most of the literature on frequency and meaningfulness. They concluded from their own research that frequency will accurately predict the ease or difficulty of learning materials of low meaningfulness, but at higher levels a third variable, pronounceability, becomes the best predictor.

The relationship between word frequency or prior exposure and speed of word recognition whether tested visually (Taylor, 1958) or aurally (Rosenzweig and Postman, 1957) has been established by many researchers as a positive linear function of log frequency and recognition time. Goldiamond and Hawkins (1958) obtained the same kind of relationship between number of pre-experimental exposures and tachistoscopic recognition time when the exposure field was left blank. The authors' conclusion that this casts doubt on the perceptual interpretation of earlier experiments seems premature because of the unusual procedure followed. Subjects were led to believe that it was an experiment in subliminal perception and that the words to be recognized would be the ones they had previously seen. This experiment shows only that exposure frequency affects guessing behavior.

A learning phenomenon with obvious educational implications was discovered by Rock (1957). He found no differences in learning speed between subjects for whom a new pair of words was substituted each time they made a mistake and subjects to whom the identical list was repeated. These findings have since been confirmed by several investigators (Rock and Heimer, 1959; Wogan and Waters, 1959; Clark, Lansford, and Dallenbach, 1960).

Other kinds of experimental evidence also support the notion that at least some learning may take place in a single trial. Bolles (1959) reported that interchanging items in the middle of a partially learned serial list produced no decrement in learning. Even the substitution of new items in the middle of the list had no effect. Investigators studying the effects of fractional occurrence of the response term in paired-associate learning found that decreasing the response term's frequency of appearance increased both errors and number of trials necessary to learn. An item analysis, however, revealed that once an item was correctly anticipated, it was seldom missed in the remaining trials (Goss, Morgan, and Golin, 1959; Schulz and Runquist, 1960). Wallace, Turner, and Perkins (1957) demonstrated that practiced subjects learning meaningful material at an uncontrolled pace could, in a single trial, acquire several hundred pairs of words in paired-associate learning.

Additional References: Allen (1958); Umemoto (1959).

Linguistics and Psychology

In the area of overlap between psychology and linguistics, progress on the mutual problems has been slow, but some of the avenues of approach

appear fruitful. For example, Carroll (1958a) found striking differences in the syntactic structure of sentences produced by subtle modifications in directions. This was true both for the written compositions of subjects describing an event and for the oral productions of subjects playing a highly technical "game." Carroll illustrated the importance of such research by showing that two categories of a widely used projective test can be accurately scored on the basis of grammar. Aborn, Rubenstein, and Sterling (1959) demonstrated that form class, as well as position in sentence and sentence length, was a significant variable in determining how well subjects could supply words deleted from sentences.

Pauses in oral productions were found to be negatively related to the predictability of words in sentences (Goldman-Eisler, 1958). MacLay and Newman (1960) used a two-person communication situation to test the effect of feedback on certain linguistic variables. The subject's task was to communicate a description of a geometric form to a hearer so that he might select the correct one from a number of alternatives. The similarity among the alternatives and the kind of feedback affected the nature of the communication. Homogeneous items and negative feedback increased the amount of verbalization. Heterogeneous items elicited a broader vocabulary. An additional finding was that the number of morphemes, a linguistic measure, and the total response time were nearly perfectly related ($r = +.98$), indicating that the gross measure could substitute for the time-consuming linguistic count.

The linguistic relativity hypothesis, as in the past, generated much philosophical discussion (Henle, 1958; Trager, 1959) but little in the way of empirical evidence. If we accept the distinction set forth by Carroll (1958b), the problem disappears. He distinguished between the "mold theory" as put forth by Sapir and Whorf and the "lattice theory." The former holds that perception is possible only within the molds formed by our language structure. This position is untenable, says Carroll, for it would logically preclude language learning by anyone who did not already have a language with which to encode the basic concepts. The lattice theory, on the other hand, states that our language structure predisposes us toward those discriminations for which we have been reinforced in the past. Given tasks such as sorting, classifying, or problem solving, we tend to rely upon these discriminations even though others are possible.

The proceedings of an interdisciplinary conference made up of representatives from psychology, linguistics, and literary criticism provided the materials for an interesting book on literary style (Sebeok, 1960). Spice was added to the stimulating papers by the inclusion of the post-paper comments by the participants. The general picture painted by the book reminds one of the parable about the blind man describing the elephant: the various disciplines seem to be attacking different parts of the anatomy, perhaps even different animals.

Brown (1958) wrote a very readable account of many aspects of language learning in a book whose theme is that language learning consists

of the development and modification of sets of categories. The book covers such topics as meaning, primitive language, reading, linguistic relativity, and phonetic symbolism.

Additional References: Attneave (1959); Henle (1958); Hockett (1958); Wallach (1958).

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CHAPTER II

Reading

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AN ANALYSIS of the research publications in reading for 1957 through 1960 reveals no new areas or techniques of research, although certain topics—such as methods of teaching—are claiming greater attention than before. For the purpose of organizing this report, the following topics have been used: general bibliographies and reviews, grouping practices, methods, materials, comprehension, factors related to reading, visual problems and reading, and remedial reading. Under each of these headings only representative studies are discussed.

General Bibliographies and Reviews

The article on reading in the *Encyclopedia of Educational Research* provides a comprehensive coverage of the research as interpreted by Gray (1960a). Divided into three main topics—sociology, physiology and psychology, and teaching of reading—this review with a selective bibliography of 412 items should be “required reading” for anyone desiring an understanding of the research background in the field.

Three annual reviews of research were prepared by Gray (1958, 1959, 1960b), continuing a series unbroken since 1925. Traxler and Jungeblut (1960) published a bulletin giving a descriptive review of research with a selective annotated bibliography of 438 items covering the period July 1, 1953, through December 31, 1957. Selected studies for the period 1955 through 1957 were reviewed by McCullough (1958).

Practical reviews of what research reveals about high-school reading were made by Gunn (1957a), Early (1957a), McCullough (1957), and DeBoer (1958). These reviews were published also in pamphlet form (Gunn, 1957b). Traxler (1957), Early (1957b), and Jewett (1957) presented reviews of research on reading in the junior high school. Bliesmer (1958, 1959) summarized the research related to college and adult reading.

Grouping Practices

In the elementary school the Joplin Plan, where reading instruction is departmentalized on ability levels, was the subject of several reports. Aaron, Goodwin, and Kent (1959) used this procedure in three fourth-

* Professor Robinson prepared the section on visual problems and reading and the section on remedial reading.

grade classrooms where each teacher taught two levels of reading ability. Although the instructional period was six months and the average gain in reading skill as measured by the *California Reading Test* was ten months, no control group was used; so conclusions cannot be drawn.

A somewhat similar study involving a total of 90 matched pairs of fifth-grade and sixth-grade children was carried out by Morgan and Stucker (1960). A year's instructional program was carried out by eight teachers who had volunteered for the study and were then randomly assigned to the experimental or control group. The results tended to favor the experimental (Joplin Plan) groups, especially at the fifth-grade level. In some comparisons, the practical significance of the difference was questionable. No provision was made to measure pupil growth in related language arts areas.

Bremer (1958) investigated the effect of assigning to a separate classroom those first-grade children who made low scores on the *Metropolitan Readiness Test*. Pupils were matched on a variety of factors (including sex, chronological age, readiness score, and teacher) with first-grade students of the next year's class. Differences in reading scores at the end of the first year were slight, but the high-readiness pupils made greater progress (0.05 level of confidence) in the more heterogeneous classroom.

Additional Reference: Hart (1959).

Methods

Research on the relationship of phonics instruction to reading ability was presented in a concise, readable account by Smith (1957). New research in this area has centered on the questions of how phonics should be taught, when it should be introduced, and to what extent it should be emphasized—not whether it should or should not be used.

A questionnaire survey by Purcell (1958) indicated that nearly all of the sampled teachers introduced children to analytical examination of words. Only 6 percent of the teachers relied on "incidental drill" in sounding or phonic instruction. A synthetic phonic method (word parts to whole words) was compared to an analytic word method (whole words to word parts) by Bear (1959), using seven control and seven experimental first-grade classrooms. Both groups used a basal reader. The control groups utilized workbooks and manuals, and the experimental classrooms presumably eliminated from the basic program "all phonic material" and added instruction from a synthetic-word-method textbook. Results favored the synthetic method. Two factors deserve special attention in evaluating the study: the experimental teachers volunteered, but the control teachers were selected. Also the experimental group probably used a combination of analytical and synthetic techniques.

Aaron (1960), using eight phonic generalizations presented by Betts, prepared a test of nonsense words to learn how well teachers and prospec-

tive teachers knew and could apply phonic rules. Although the results were disappointing, it may be that the *rules* and not the teachers were at fault—for some of the rules appear to have as many exceptions as applications. Aaron's work is an exploratory study in an area which deserves much more attention.

In a report of a series of studies, Durrell (1958) challenged some traditional aspects of the first-grade reading program. With a variety of approaches—including early instruction in names and sounds of letters, omission of readiness instruction for bright children, and careful supervision—good reading growth was attained by his experimental groups. From the nature of the design, it is difficult to assign Durrell's results to a particular variable. More research is needed on these aspects of the first-grade program. Robinson (1959) presented an analysis of Durrell's procedures and conclusions.

The most intriguing problem of method in the period under review is the revival of the philosophy of a child-centered reading curriculum, now implemented through programs described as *individualized* or *self-selection* reading. Smith (1960) believed these methods have promise in serving "as one part but not constituting all of the instructional program." Witty (1959), in a balanced and thoughtful article, reviewed and evaluated the philosophy and some of the pertinent research on individualized reading.

Though the literature is replete with testimonials by teachers (for example, McVey, 1960) who wish to "stand and be counted" for individualized reading, the published research on the value of the method is meager and often so unsophisticated as to be almost meaningless. Illustrations of such research are provided by Sharpe (1958) and Kingsley (1958). Sartain's (1960) work is the most careful and extensive reported to date. Using a rotation plan where each teacher in the experiment used individualized reading for part of the year and a basic reader for another part, Sartain compared growth of second-grade children under both approaches. He found that whichever method was used, children achieved greater growth during the first part of the year. This was an important finding, for, without a balanced rotation, whichever method had been used first would have appeared to be the better.

Test results revealed that basic instruction was superior (0.05 level of confidence) for the "low-reading" group in developing reading vocabulary. Other differences were not significant. Teacher reaction was assessed for advantages and disadvantages of the individualized method. On the basis of his experimentation, Sartain recommended a judicious combination of both methods. Gates (1958) took a similar stand: "We should nip in the bud the idea, now beginning to emerge, that one must accept one or another of two antagonistic systems. We must undertake to discern the good features of each and attempt to embody them into what should be a better system than either."

There is no conclusive evidence at present to support abandonment of basic programs in favor of a completely individualized approach.

Additional References: Bloomer (1960); Bohnhorst and Sellars (1959); Durrell (1959); Kelly (1958); Luser, Stanton, and Doyle (1958); McCullough (1957a); Muehl (1960); Veatch (1960).

Materials

No major studies of the evaluation of materials or their usefulness appeared during the last three years. Tinker (1960), continuing his careful investigations of typography, provided some data on the construction of mathematical tables: (a) for maximum efficiency in locating information, the numerals should be grouped in columns by fives or tens; (b) a rule in addition to a one-pica space between columns apparently makes little difference in speed of location of information.

Blakely (1958a, b) investigated the type (quality) and extent of comic-book reading by seventh-grade boys and girls. He found (a) that there was less reading of comics than some earlier investigators had found; (b) that few poor quality comics were being read; and (c) that boys who read the most comics also read the most library books. His studies contained no evidence to support forced curtailment of comic-book reading.

Powers, Sumner, and Kearn (1958) provided a "recalculation" of the Flesch, Dale-Chall, Gunning, and Farr-Jenkins-Paterson formulas by using the 1950 revision of the *McCall-Crabbs Graded Test Lessons in Reading*. In view of the research available on the original formulas, the new regression equations developed by Powers, Sumner, and Kearn should probably not be used when comparisons with earlier studies are to be made. The computing diagrams provided by Powers and Ross (1959), since they are based on Powers's "revised" formulas, are subject to the same limitations.

In a discussion of research needs in readability, Powers and Kearn (1958) pointed to a number of areas requiring study. One problem mentioned by Powers and Kearn, sampling reliability, was investigated by Clymer (1959), who found that method of sampling had little influence on results for the Spache readability formula and that three samples provided a reliable estimate when primary-science texts were measured.

The research on readability was brought together in a comprehensive fashion by Chall (1958). Her scholarly work is important not only for the information it provides on readability, but also as an illustration of what should be done in many areas of reading.

Additional References: Bloomer (1959); Brinton and Danielson (1958); Felton (1957); Reeve (1958); Repp (1960); Staiger (1958).

Comprehension

In a series of related articles Sochor (1959b), Artley (1959), Eller and Dykstra (1959), and Williams (1959) presented an analysis of theory

and research related to critical reading. The articles, each accompanied by an extensive bibliography, were published together in pamphlet form (Sochor, 1959a).

Letson (1958) attempted to bring new light to an old problem by investigating the relationship of speed and comprehension, considering the purpose of reading and the difficulty of the material. Using two methods of scoring comprehension, number of correct responses and percentage correct of the items attempted (accuracy), he reported a substantial correlation (.77) between number of correct responses and speed of reading easy material, and a moderate correlation (.46) between number of right answers and speed of reading difficult material. When comprehension was measured by accuracy scores, relationships between speed and comprehension were low and negative. Purpose of reading made little difference in the relationship between speed and either measure of comprehension. In a related study, Letson (1959) reported that little adjustment of reading speed was made with a change in purpose. Difficulty of material was more influential in changing reading rate than was purpose. Further study in this area is needed, particularly with contrasted groups of readers.

Maney (1958) and Sochor (1958), in parallel studies, attempted to assess the relationship between general reading ability and critical reading in science and between general reading ability and critical reading in social studies. In both studies, the results led the authors to conclude that general reading ability and critical reading in a content field were not highly related. Unfortunately the authors did not indicate the reliability of their tests so that this factor could be considered in judging the various relationships presented.

Additional References: Cook (1957); Gray (1958); McCullough (1957b); Schwartz (1957).

Factors Related to Reading

Recent studies of eye movements were carefully reviewed by Tinker (1958). His observations indicated (a) a general trend to electrical recording rather than corneal reflection, (b) a lessened activity in the field, (c) at present, a stage of diminishing returns in the value of the research, and (d) no promise of major findings in the future. Gilbert (1959) was much more optimistic than Tinker on the contribution which eye-movement research can make to further understanding of the reading process.

Perception and its relationship to success in first-grade reading were studied by Goins (1958). She investigated two major problems: (a) Does visual training, according to Renshaw, produce an increase in reading ability at the first-grade level? (b) Is performance on visual-perceptual tests at the beginning of grade 1 related to success in reading at the end of the year? To answer the first question, a careful program of visual-per-

ception training, using the tachistoscope, was administered to a well-selected experimental group, and no training of this type was given to the control group. No difference in reading ability existed at the end of the training period.

Goins selected 14 tests of visual perception from the investigations of T. G. Thurstone to test the relationship of perception to first-grade reading ability. Detailed analyses of the results led Goins to conclude (a) that various "types" of perceptual abilities exist and (b) that perceptual tests show significant correlation with success in first-grade reading. A weakness in design should be noted: Correlations of the perceptual tests and reading measures were computed by pooling two schools with greatly different mean IQ's (126 vs. 102).

Mental imagery and reading was studied by Fennema (1959), who asked children to describe a picture they would draw in response to material they had read silently. The number of mental images correlated negatively with intelligence and with reading ability. Since Fennema did not report the directions she gave the children, and a mental image was defined as an action or color not specifically included in the material read silently, the negative correlations may indicate that bright, good readers saw the task as simply reporting what they had read. Further research is needed in this area.

The value of continued reading throughout the summer vacation was demonstrated by Aasen (1959), who compared growth of two groups of children. One group was stimulated to continue reading throughout the summer. A comparable control group did not receive such stimulation. A retest at the beginning of the next school year revealed that the group which read throughout the summer substantially improved its reading ability whereas the control group did not.

Wepman (1960), after examining relationships between auditory discrimination, articulation, reading ability, and intelligence for a group of first-grade and second-grade children, suggested that children be studied at school entrance to determine whether their auditory abilities will permit them to profit from phonics instruction. Grouping children as *auditory learners* and *visual learners* for initial instruction was seen by Wepman as one way to adjust for individual differences in the primary grades.

Additional References: Ahmann and Glock (1957); Bremer (1959); Chansky and Bregman (1957); Entwisle (1960); Gleason and Klausmeier (1958); Hoyt and Blackmore (1960); Karlin (1957); Klare, Shuford, and Nichols (1958); Klausmeier, Beeman, and Lehmann (1958); Krantz (1957); Murphy (1957); Schoonover (1959).

Visual Problems and Reading

Fewer studies have dealt with vision and reading than in previous years. However, the reviews and interpretation of research by Eames (1959) and

Huelsman (1958) reveal that controversial issues remain. One of the basic problems is to evolve a dependable procedure for identifying visual problems before they become related to reading.

Blum, Peters, and Bettman (1959) reported a comprehensive investigation which sought to develop a visual-screening program for use in the average school system. The program aimed to identify children who both ophthalmologists and optometrists agreed needed visual care—agreement being necessary to avoid professional conflicts and to minimize over-referral. In a pilot study both professional groups examined 229 children to determine acceptable clinical criteria. The initial screening procedure included teacher and nurse observation, the Snellen E test, the Massachusetts Vision Kit, the Telebinocular test, and the Modified Clinical Procedure (an abbreviated professional examination).

Four clinical criteria for referral emerged from the pilot study. The number tested each of the three years was 941. Phi coefficients and tetrachoric coefficients of correlation were used to test the relative merits of each procedure. The Snellen E test selected only about one-fourth of the pupils needing referral, but without the cover test, produced a low over-referral rate. Neither the questionnaire nor the observations proved to be of value. Based on the cost of over-referral and the number not identified, the conclusion was reached that the Modified Clinical Procedure, which proved to be both valid and reliable, was most efficient and therefore most economical.

Among those who were tested in successive years, the only statistically significant change with increasing age was toward more myopia, which was readily identified by the Snellen testing. When all data were considered, the authors recommended that a Modified Clinical Procedure, applied by a qualified professional examiner, be used for all children in grade 1 and all new school entrants thereafter; that others should be screened annually with the Snellen procedure; and that those who failed should be rechecked by the Modified Clinical Procedure.

This investigation was of significance because it brought together optometrists and ophthalmologists; because it was one of the first to establish and apply clinical criteria for referral; and, finally, because it determined the most effective procedure for visual screening at lowest cost. A study of the reading achievement of pupils tested in this way would add materially to insight into relationships of vision and reading.

Walton (1957) related speed of perception to rate of reading. He collated the research in these two areas to determine the upper limit of rate of reading, excluding skimming. First, he reviewed the literature to ascertain the number of letters and letter spaces in words seen tachistoscopically as an estimate of the amount of material that could be taken in at one fixation. Second, he secured evidence of the minimum amount of time required to move the eyes from one fixation point to the next. Last, he combined data to calculate the maximum possible rate of reading of those who exhibited different reaction times in relation to the number

of fixations. On this basis he concluded that the reading rate for educated adults ranged from 207 to 290 words a minute. However, reducing reaction time and number of fixations, and interfixation time to the minimum reported by investigators, and considering the time required for return sweep, Walton concluded that the highest possible speed of reading was 1451 words a minute.

The foregoing analysis is of special interest because it brings together information from a variety of studies and arrives at an upper limit in reading rate. However, the investigator failed to consider the fact that anticipation of meaning in contextual materials may increase the perceptual span materially. His conclusion should be tested by taking eye-movement photographs of persons purporting to read at higher rates so as to determine the maximal rate when meaning assists the reader.

Additional References: Gilbert (1959); Robinson and others (1960).

Remedial Reading

The constant search for causes of reading retardation continued. Vernon (1957) brought together and interpreted the research, dealing first with visual and auditory perception in reading and later showing how these factors limited speech, cognitive ability, and reading progress. In addition, she reviewed research dealing with innate, acquired, and environmental factors which interfere with reading progress. She concluded that reading is such a complex process that interferences of many kinds and of different degrees may combine to cause problems.

In direct contrast was the study by Smith and Carrigan (1959), who rejected the multiple-causation theory and searched for a single one which might account for nearly all problems. Accumulation of the symptoms of selected cases led them to theorize that all reading disability could be attributed to the balance and level of acetylcholine and cholinesterase at the junctions of the neurons. They tested this model, using 15 physical-psychological and educational tests with 701 of the lowest readers in grades 7 through 9. After raw scores were converted to *T* scores, a coefficient of profile similarity was computed for some children, and a cluster analysis led to the placement of each pupil in one of five groups. A medical analysis of 41 cases was essentially negative. Nevertheless, by implication from test performance, approximately 40 children were characterized by the dimensions mentioned earlier. When the authors were unable to classify pupils by these dimensions alone, anxiety was added. Multiple-vitamin capsules, Cytomel, and Miltown were administered to members of different groups who at the same time were tutored in reading. The reading gains made were attributed to the medication, and the authors concluded that their model constitutes a useful theory.

An excellent review of this book, by Harris (1960), pointed out fundamental weaknesses in definition of reading disability, in limitation of tests used, in statistical treatment of data, in remedial procedure used, and fi-

nally in inferential reasoning relied upon to reach conclusions. Other reviews have confirmed the distinct limitations of this study, and as a result it should still be considered a theory needing adequate testing.

A second report supplied a neuropsychological explanation for reading disability. Delacato (1959) attempted to identify traits common to 45 boys ages 8 to 18 who applied for diagnosis and remedial instruction in a summer clinic. He found that 29 traits were not common to the group, four were fairly common, five were common, and seven were universal. Among the most common traits were reversals in reading and writing, poor spelling, inability to learn to read by a sight or phonetic method, higher vocabulary than comprehension scores on tests, and very slow rate of reading. Pupils disliked reading, had more difficulty with small than with large words, and later did poorly in English in secondary school. The foregoing symptoms were interpreted as being in the neurological realm.

Review of the research in neurological problems related to reading led Delacato to conclude that dealing with language required integration of the whole individual at the most efficient level—that of unilaterality. For prevention and correction, therefore, he suggested making the dominant hand most skilled, strengthening the dominant eye through occlusion, developing a dominant foot, and deleting tonal activity (including oral reading). Case studies were offered in support of the treatment.

The traits which Delacato offered as common to retarded readers are familiar to anyone who has had experience in a reading clinic. Furthermore, a large proportion of such pupils are taught to read without corrective procedures in establishing dominance. Therefore, clinical experience does not support his single-cause theory of reading disability.

Harris (1957) also investigated the laterality of 316 clinic cases and 245 unselected subjects 7 to 11 plus years of age. The Harris Tests of Lateral Dominance, knowledge of left and right, and simultaneous writing were used to determine differences in the two groups. He found, with increase in age, a greater increase in lateral dominance among the unselected subjects, and also in preference for the right hand. Directional confusion was significantly more common to poor readers at age seven, but by age nine the two groups had converged in this particular. Tests of eye and foot dominance did not distinguish between groups. He concluded that the preference for one hand developed slowly, indicating a maturational lag, perhaps of a neurological nature.

Another report of factors related to reading disability was made by Kawi and Pasamanick (1959). They examined records of prenatal histories as well as selected items of postnatal histories of 205 male reading-clinic cases and an equal number of matched controls. They were particularly concerned with evidence of minimal cerebral injury which might distinguish the two groups. The two groups were classified according to sociometric deciles. Then the presence or absence of complications of

pregnancy, delivery, the neonatal period, and prematurity were recorded. Differences between the two groups in socioeconomic status which may have been related to the selection of subjects emerged. Of special interest was the discovery of a significantly higher proportion of premature births among the retarded readers. Also, abnormalities of the prenatal period occurred more frequently among retarded readers. This study was as carefully controlled as possible considering the facts that the pupils were about 10 years old and that for many of them birth records were not complete. The authors recognized this limitation and furthermore did not attribute reading disability to the factors they identified.

Previous investigations have shown multiple deficits of retarded readers when many factors were considered. It is not surprising, therefore, to find the deviations from expectancy shown by the foregoing reports, each limited to selected areas.

Additional References: Aaron (1960); Anderson (1958); Bliesmer (1958); Bolling (1958); Durkin (1960); Ewers (1957); Fry (1959); Hill (1960); Leavell and Beck (1959); Moe and Nania (1959); Morrison and Perry (1959); Natchez (1959); Newton (1959); Plattor and others (1959); Raygor, Vance, and Adcock (1959); Roberts and Coleman (1958); Stake and Mehrens (1960); Tabarlet (1958); Wilson (1959).

Summary

The research in reading during the last three years is impressive in both its quantity and diversity. Yet much remains to be done. The important problems of what changes take place in the individual when the ability to read is acquired, the mental processes involved in reading, and the techniques of learning used by successful achievers are still relatively unexplored areas. Outer space is not the only frontier. Reading qualifies, too.

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CHAPTER III

Listening

SAM DUKER

AN INCREASE in interest in the nature of the listening process and in the best procedures for teaching efficient use of this process has marked the past three years. This increase has not only been quantitative but also has been evidenced by broadening inquiry into new aspects of the subject. As is true of inquiry about any new area, research on listening has not been co-ordinated, and as a result there tends to exist duplication and often a lack of acquaintance with previous studies. There has been an amazing increase in space allotted to listening in textbooks on speech and language arts as well as in recent curriculum bulletins. Unfortunately, the material often fails to reflect the results of investigation.

This chapter does not deal with studies of hearing, of the mass media, or of listening to nonverbal sounds such as music, except as they can be related to verbal communication. It is confined to research dealing with listening to the spoken language. Such research occurs in the fields of English, education, speech, psychology, and sociology.

Summaries and Bibliographies

An extensive bibliography on various aspects of listening was prepared by Nichols and others (1957), who classified references by type of publication rather than by topic. Keller (1960) and Toussaint (1960) reviewed research done during the past decade. Keller saw substantial progress in testing and teaching methodology but also saw need for more attention to the thought processes that take place during listening. Toussaint thought further investigation desirable into the administration of listening tests by mechanical means, the aural approach to teaching a number of subjects, and the reasons for contradictory findings of existing research.

Early (1960) called attention to the growing interest in the teaching of listening and to some of the research dealing with the importance of listening in human communication. Broadbent (1958), who has long been interested in the psychological aspects of the auditory process, contributed an extremely valuable review of the research in this area. He reviewed research on selective listening, one-channel and two-channel listening, the effects of noise, the nature of extinction, and individual differences. He concluded that many of the phenomena discovered by the studies he reviewed can best be explained in terms of information theory.

Additional References: Harris (1958); Jeffress and Moushegian (1959); Laurence (1957); Rubenstein and Aborn (1960); von Békésy (1960).

Tests

The Educational Testing Service (1956-57) produced two forms of a four-level test intended for use in grades 4 through 14. This was the first published test designed for use below grade 11. It was part of a battery of tests in many subject areas and has had wide use. Published research on its validity and on its other aspects is still lacking. Reviews by Lorge (1959b), Lindquist (1959b), and Jackson (1959) were critical of the size of the sample used in establishing norms and also questioned validity. Reviews by Lorge (1959a) and Lindquist (1959a) of the *Brown-Carlsen Listening Test* tended to be critical of procedures used in devising the test.

Hayes (1957), after analyzing 10 reading tests for beginners, constructed a listening test for use in the primary grades. Her study is a model of careful, scholarly preparation of test items and of rigid test evaluation. Test questions include vocabulary and sentence completion items. Launderville (1958) devised a listening test for use in the reading-readiness stage. She found that the results of her test correlated significantly with reading achievement a year later and concluded that the test might have value as a predictive instrument. Moe (1957) performed a similar experiment with a smaller number of subjects but failed to find that listening performance was a significant predictive measure of later reading achievement.

Haberland (1958, 1959) found that results obtained on the *Brown-Carlsen Listening Test* corresponded closely to the results on the aural portions of various reading and intelligence tests. He also found that administration of this test by persons trained in speech did not yield results significantly different from those obtained when the test was administered by persons not trained in speech.

A phase of listening previously neglected by test constructors was investigated by West (1958), who developed an instrument to measure critical or evaluative aspects of listening. Testees were asked to identify the theme, the action suggested, ideas offered, and supporting material in a given presentation. Although this effort was, admittedly, only a beginning, it was a valuable step toward the evaluation of this crucial aspect of good listening.

Nature of the Listening Process

The relationship between the abilities involved in listening to music and to language was explored by Wilson (1960). Analyzing listening and intelligence tests taken by 369 pupils in grade 6, he reported correlations between music and language listening of .16 to .40. He found that pupils in the upper quartile in listening to language tended to have significantly higher scores in listening to music than did those in the lowest quartile. This study has great potential significance in determining

the validity of the concept of *auding*. Plessas (1957) found a significant positive relationship between high listening scores and scores in reading and intelligence tests.

The relative effectiveness of listening and reading as a means of learning continued to fascinate researchers. Witty and Sizemore (1958, 1959) reviewed almost 100 studies dealing with this question and concluded that the contradictory findings could best be explained by recognizing that efficiency in learning depends not nearly so much on the mode of presentation as on a complex of other factors. King (1959) tested 475 last-term primary-school pupils in England and reported no sharp differences between listening and reading comprehension. He confirmed previous findings that boys seem to favor the auditory approach more than do girls. Gray (1958), in an elegantly designed study, found no differences in a test comparison of reading and listening to poetry. He tested grasp of central meaning and of central and metaphysical images, as well as overall understanding and ability to make critical comments.

An extensive résumé of the art of listening from the psychiatric standpoint was prepared by Barbara (1958). He found various kinds of listening, types of bad listening habits, and a relationship between listening and personality. Bossard (1958) made tape recordings of 200 family dinner-table conversations and analyzed them to show the importance of listening.

Kegler (1958) investigated the reading and listening vocabularies of 211 high-school students. To ensure careful measurement he used individual intelligence tests. He found no support for previous findings that those of high intelligence tended to possess larger reading vocabularies than listening vocabularies, but saw some indication that students with low ability tended to possess larger listening vocabularies than reading vocabularies.

Diehl, White, and Burk (1959) changed the speed of delivery of passages from 145 words per minute to 172, 160, 135, and 126 words per minute by altering only the pause time between sounds and words. They reported no differences in comprehension. Brown (1959) investigated anticipatory sets to listening and reported no significant differences for different sets. Brown also found no differences in listening efficiency between subjects who had a theoretical interest in listening and those who had not.

Additional References: Bird (1960); Greif (1958); Hast (1958); Nichols (1960); O'Connor (1959); Smith (1958); Strickland (1958); Triggs (1957); Westover (1958).

The Place of Listening in Teacher Training

On the assumption that listening is not likely to be taught effectively at the elementary and secondary levels unless its teaching is included in teacher-training programs, Markgraf (1960) made a questionnaire study

of 411 member schools of the American Association of Colleges for Teacher Education. Directing 1111 questionnaires to speech, English, and education departments, he obtained a remarkably high return. A total of 839 returns were received from 406 of the 411 colleges solicited. Courses for credit in listening are offered at the University of Minnesota, Bradley University, and Western Michigan University. In 88 out of 188 speech-methods courses, a special unit on the teaching of listening is included. He found also that 92 out of 214 English teaching-methods courses and 188 out of 258 elementary-school-methods courses included units on the teaching of listening. A valuable summary giving status of the teaching of listening at each of the responding institutions was included by Markgraf.

The Teaching of Listening

Most research studies during the period under review were concerned with ways of teaching listening skills. The most novel approach was in the film, *Effective Listening*, developed by E. C. Conboy and William A. Buehler (1959), in which a large amount of information about the listening process is compressed into a well-made, 15-minute film. Nichols and Cashman (1960) stressed the importance of teacher attitude and example in the teaching of listening. Russell and Russell (1959) performed a most useful task in gathering together various techniques for teaching listening skills in the elementary school, classifying them by grade level and by types of listening.

Additional References: Canfield (1958); Clark (1958); Dow (1958); Early (1958); Fulton (1959); Giffin and Hannah (1960); Hosey (1959); Kelly (1958); Lewis (1960); Nichols (1960); O'Connor (1959); Smith (1958); Terango (1959); Wagner (1957); Wagner and Hosier (1959); Wehr (1957).

Summary

Listening as an area for research has reached a new stage of maturity during the past three years. There remains, however, much to be done. Results obtained from studies using inadequate samples, unsuitable techniques, and unsophisticated analyses tend to be contradictory. Confusion rather than clarification is the result. Probably as a result of the recency of interest in the importance of listening, many research reports contain a large amount of exhortatory material presented with missionary zeal. This seems superfluous and inappropriate. Studies characterized by better experimental design and more careful analysis could do much to point the way to the most productive ways of teaching listening skills. Now that past research has laid a good foundation of educational and psychological principles on which future work can be based, it is to be

hoped that the next three years will produce research more rigorously performed.

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CHAPTER IV

Speaking

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THIS CHAPTER seeks to highlight reports of significant investigations appearing in speech publications during the past three-year period. Fortunately, the area is adequately indexed, and studies not noticed here can readily be found.

Bibliographies, Reviews, and Indexes

Gray (1957) indexed 250 doctoral dissertations in drama, speech education, and the sciences basic to speech. Auer's (1958, 1959a) listing of doctoral dissertations in progress continued a series that has been published annually since 1951. This series complements that of Dow (1958, 1959, 1960), consisting of 500-700 word abstracts of completed doctoral dissertations, which has appeared annually since 1946. A companion index by Knower (1958, 1959, 1960) presented numerical summaries of all graduate degrees by author, title, school, and subject matter; it has been published annually since 1935.

Annual bibliographies in rhetoric and public address, edited by Cleary (1958, 1959a, 1960), have appeared since 1951. Numerical and percentage summaries by author, institution, content area, and research method for the three Speech Association of America journals of the period 1935-58 were published by Brooks (1959). An index to *Speech Monographs*, 1934-59 (Gray, 1960), appeared as a special issue of that periodical in 1960. Auer's (1957) bibliography for American Studies programs includes many additional references.

Auer's (1959b) was the first text specifically designed to introduce graduate students to research methods and techniques in speech. Although not itself a bibliography, it contains comprehensive summaries of bibliographical material. Clevenger (1959) reviewed research on stage fright, most of which appeared in speech publications, and offered interesting hypotheses concerning interrelationships among common subjective, objective, and physiological measures of the phenomenon. All in all, the bibliographical and review sources available in speech are numerous, comprehensive, and well diversified.

Historical-Critical Studies

Numerous investigations dealt with the theory of rhetoric and the practice of public address. Recent rhetorical studies included the "recovery" of obscure treatises: Nadeau (1958) translated Hermogenes' second-century *On Stases*; Brennan (1960) traced the genesis of Susenbrotus'

1541 *Epitome Troporum ac Schematum*; and Ong (1958a, b) contributed a definitive inventory of the writings of Peter Ramus and Omer Talon as well as a major study of Ramus' life and works. Critical re-evaluations of traditional treatises included Black's (1958) on Plato's *Gorgias* and *Phaedrus* and Bitzer's (1959) and Mudd's (1959) on Aristotle's view of the enthymeme. Fresh analyses of standard rhetorics included Bitzer's (1960) defense of Campbell's 1776 doctrine of evidence, and Cohen's (1958) explication of Blair's 1783 concept of aesthetics in rhetoric and belles-lettres.

Less well-known figures were treated in Wagner's (1960) definitive introduction to Thomas Wilson's first complete rhetoric in English in 1553, Cleary's (1959b) review of Bulwer's Renaissance works on expressive action, and Brigrance's (1958) interpretation of Descartes' impact on the language of contemporary speech. Howell (1959) introduced other early writers in a study of the elocutionary movement in England, establishing its origins within the 1700-48 period rather than the accepted post-1750 era.

Other studies focused on rhetorical implications in writings of scholars from related disciplines. Hochmuth (1958) assayed the contributions of I. A. Richards to a general theory of communication; Torrence (1959) related rhetoric to philosophical inquiry in the works of Bertrand Russell; and Brockriede and Ehninger (1960) applied the logical formulations of Stephen Toulmin to a classification and analysis of rhetorical arguments. Langer (1960) wrote perceptively of post-Darwinian concepts of the origins of speech and its communicative function.

Finally, a number of studies examined the role of rhetoric in education. Phillips (1959) explored public speaking in the Talmudic academies of Babylonia, A.D. 50-500; Oliver (1959) traced the rhetorical tradition in the Confucian schools of Korea, 1392-1910; Lang (1958) reviewed rhetorical training in the Port-Royal *petites-écoles*, 1646-60; Gillis (1959) examined speech instruction in eighteenth-century and nineteenth-century Jesuit education; and Reid (1959) reported on the 1806-1904 history of Harvard's Boylston Professorship of Rhetoric and Oratory.

Research in public-address history is classifiable by scope and emphasis. First are comprehensive studies of individual speakers. Notable in the period under review is a series on British orators: Reid (1957) on Fox, Arnold (1958) on Lord Erskine, Lomas (1958) on Churchill, Austen (1958) on Gladstone, Wood (1958) on Macaulay, C. D. Smith (1959) on Lord North, and Stelzner (1959) on Morley.

In a second category fall limited studies of individual speakers. Crowell (1958) analyzed five speeches of F. D. Roosevelt to ascertain the extent and nature of his *ad libitum* changes from prepared texts; Windes (1960) went behind the 1956 utterances of Stevenson to reveal the personnel of his "speech staff," its methods, and its contributions. Linkugel (1959) reviewed the stump speaking of Seymour in 1868 as he defied a tradition

of passive presidential campaigning; and Spalding (1959) concluded that W. J. Cameron was the voice of "nineteenth-century liberalism" on the "Ford Sunday Evening Hour," 1934-42.

Regional and period studies were represented by Martin's (1957) analysis of the characteristics of speech style in the ceremonial oratory of the "Golden Age" of American speaking, 1800-50, and by Hudson's (1958) characterization of rhetorical invention as "sacred logic" in Colonial New England preaching.

Studies of speakers for a common cause included Kerr's (1959) review of "the rhetoric of political protest" as reflected by Father Coughlin and Congressman Lembke in the 1936 Union Party campaign. Quimby and Billigmeier (1959) took a longer historical view, analyzing American Protestant evangelism, its pre-Graham revivalistic preaching by Finney, Moody, Sunday, and others. The highest standards in historical-critical research were met in Gunderson's (1957) book-length analysis of "The Log-Cabin Campaign" of 1840.

Case studies of single speeches, *in situ*, continued a fresh approach to public-address history, blending careful accounts of the specific audience and occasion with those of the speaker and his communication. Richards (1958) applied this technique to John Marshall's judiciary speech in the 1788 Virginia Federal Ratifying Convention; Thomas (1959) did the same in a study of the prosecuting speech of Benjamin F. Butler in Johnson's impeachment trial; and Vasilew (1957) investigated the experience of Norman Thomas before what he described as "the only completely hostile audience . . . I ever faced," at the 1936 Townsend Convention.

Another kind of public-address research centered upon special speech types and occasions. Martin (1958) rejected sophisticated maligning of the traditional Fourth of July oration and found this speech type a unifying rhetorical force, homogenizing popular national values in nineteenth-century America. Miles (1960) explored the tradition of the national nominating convention keynote speech and identified its common themes. A special focus, involving textual analysis and collation, appeared in Erdman's (1960) study of the quality of parliamentary reporting by Coleridge and his contemporaries in 1800.

A few studies dealt directly with the process of criticism. In his treatment of John Morley, Moore (1958) added substance to the idea that English historians excel as public-address critics, and Baskerville (1959) approached the same conclusion by identifying "dramatic" and "literary" emphasis in much American criticism. Murphy (1958), however, argued that literary evaluations of speeches can be as solidly based as social or historical ones.

Special notice should be taken of a volume devoted to the rhetorical idiom, edited by Bryant (1958), and dedicated to Herbert August Wichelns. It includes 18 studies of high merit, covering the whole field of rhetoric and public address.

Tests, Measurements, and Research Instruments

The circuitry and physical structure of a new audience-response analyzer were described by Brockhaus and Irwin (1958). This instrument periodically samples listeners' conscious responses throughout a program. Flexibility and modest cost make it a promising technique for obtaining a profile of audience response.

A description of methodology used in developing a new intelligibility test (but not of the test itself) was presented by Asher (1958). Tests for appraising the reliability of a group of practiced judges evaluating samples of children's articulation were compared by March and others (1958). Several refinements in the measurement of stage fright through chemical reactions to palmar and finger-tip perspiration were reported by Brutten (1959). Brutten's procedure involved the reaction between soluble ferric chloride and mimeograph paper treated with tannic acid, and his contributions were in refinements of technique.

The first report of an investigation using the promising new *Osgood Semantic Differential* as a measuring instrument was made by Nebergall (1958), who compared listeners' received connotative meanings with speakers' intended meanings. A second study by R. G. Smith (1959) replicated Osgood's factor-analytic work with data drawn from the general speech field to yield a research instrument designed specifically for speech. Working with the Osgood instrument, Thomas and Ralph (1959) found the evaluative scales to furnish a valid index of attitude shift. The semantic differential in specially adapted forms seems to hold real promise for quantifying and analyzing complexities of the communicative process.

Weaver (1959), with a semantic scale of his own devising, concluded that intelligence is approximately four times as effective as social-attitude score in relation to academic achievement of twelfth-grade pupils. Increasingly greater numbers of measuring devices are being developed for the speech field.

Additional References: Crocker (1958); Douglas (1958); Laase (1958).

Quantitative Studies

Investigations directed toward identifying and quantifying the underlying acoustical phenomena constituting speech signs also appeared with greater frequency in research literature. In general, these have been soundly conceived and carefully executed studies. Using analysis of variance, for example, Harbold (1957) concluded that "... discrete magnitudes of interphonemic transitional influence exist as entities ... and can be differentially recognized and identified" (p. 297). Kretsinger and Young (1960) compared the intelligibility of speech output submitted to two types of electronic intensity control and found "limiting" to produce

higher scores in the presence of competing noise than "clipping." A study by Leith and Pronko (1957) added considerably to information concerning the disintegration of speech (rate and intensity) in response to stress created by delayed auditory feedback. In another "microscopic" study Summers (1958) found significant differences for eight vowel sounds at various pressure levels for both internal nasal and combined external oral-nasal sound pressures.

Among the "microscopic" investigations was one by Diehl, White, and Burk (1959) which corroborated the conclusion that speech-rate alteration within the normal delivery range does not appreciably affect comprehension. Moses (1959), using the type-token ratio as a measure, found additional evidence to support the belief that writers use a more diversified vocabulary than do speakers.

Several speech-personality relationship investigations were made, including one by Mallory and Miller (1958) in which biserial correlations between dominance and introversion and pitch, loudness, resonance, and rate were made. Slight but significant correlations were found between some of the pairs. The relationships between personality traits and discussion behavior were investigated by Scheidel, Crowell, and Shepherd (1958); the results suggested "notable relationships between such personal characteristics as self-confidence, independence, and dominance and the 'Individual Prominence' dimension of discussion behavior." With a somewhat different approach, Utterback and Fotheringham (1958) found inconclusive relationships to exist among discussion-group size, length of discussion, and degree of moderation.

Ball (1958) explored the relationships between rated speaking ability and measures of the factors of verbal comprehension and general reasoning. Low but significant correlations were found for the male subjects. Hovland (1957) and Hovland and Janis (1959) added two collections of experimental studies to their significant series on mass communication and persuasion, the first dealing with the effects of sequences of presentation, and the second with individual differences in persuasibility.

Finally, mention should be made of Peterson's (1958) excellent summary evaluation of the present status and outlook for quantitative research; he pointed up the eclectic and interdisciplinary nature of speech, warned against the inherent weaknesses of single-avenue approaches, and advocated sound basic-research programs.

Additional Reference: Becker and Dallinger (1960).

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CHAPTER V

Composition, Handwriting, and Spelling

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THE MOST RECENT summaries of the teaching of writing appeared in the *Encyclopedia of Educational Research*, third edition (1960)—Harris on handwriting, E. Horn on spelling, and Searles and Carlsen on English—and in a series contributed by the National Conference on Research in English to *Elementary English*. In the latter, Parke (1959) summarized research on composition in the primary grades; Edmund (1959), on composition in the intermediate grades; T. Horn (1960), on spelling; Herrick (1960), on handwriting; DeBoer (1959), on grammar in language teaching; and Strickland (1960), on the evaluation of children's composition. The series was edited by Burrows (1960) and published as a bulletin by the National Council of Teachers of English.

The *Fifth Mental Measurements Yearbook* (Buros, 1959) listed and reviewed new tests in the field of written expression. Letton (1957) annotated references on research in elementary language arts, and Anderson and Staiger (1957) listed research studies completed and in progress in 1956. Phi Delta Kappa published lists of *Research Studies in Education*, both those in progress and those completed (Jensen, Lyda, and Good, 1957; Lyda and others, 1958; Lyda, Anderson, and Good, 1959), including many in the language arts.

Curriculum and General

Furness (1957), evaluating trends in the teaching of English, cited the decline in the relative number of teachers of English, with the resultant assignment of English classes to home-economics, physical-education, and other teachers; the low subject-matter requirements for teachers of English in many states; and the tendency to underemphasize humanistic values in core courses. On the other hand, Mersand (1958) saw numerous favorable developments in the teaching of English. Among these were extensive efforts at curriculum revision, typified by the work of the Commission on the English Curriculum of the National Council of Teachers of English; improved articulation among the various school levels by means of meetings which include elementary, high-school, and college teachers; increased individualization of instruction through special programs for the gifted and the slow learners; the use of TV and other audio-visual aids; closer relationship between teacher and supervisor; greater utilization of extraclass experiences to enrich the student's background of experience; attendance at summer workshops and national

meetings; and the organization of regional associations of teachers of English.

Winter (1957) found low correlations among such factors as motor ability, oral language, drawing, writing, reading, and spelling in first-grade and second-grade children. She properly cautioned teachers and others not to proceed on unexamined assumptions about the interrelationships of the various abilities of young children.

The Teaching of Composition

Research on the teaching of composition is particularly difficult because of the highly subjective nature of the product. Nevertheless, numerous investigators have had the temerity to study ways in which writing skills may best be cultivated. For example, Carlson (1959) compared two methods of teaching intermediate-grade children to write original stories. Fourteen hundred samples of children's writing were evaluated. Using two specially designed scales with equated groups, Carlson found that the use of a variety of stimuli including multisensory experiences, pictures, literature, and toys resulted in greater fluency and originality than did the use of story titles alone.

Halvorsen (1960) studied randomly chosen compositions and responses to an attitude inventory to determine whether emphasis on stimulation or on mechanical accuracy was more effective in producing compositions of high quality. She concluded that the "mechanics group" wrote significantly shorter sentences and made significantly fewer errors in spelling than the "stimulus group." The "mechanics group" improved in paragraph structure, whereas the "stimulus group" improved in plot development—suggesting that children learn specifically what they are taught.

Home background and frequency of experience with written expression are commonly regarded as important factors in the improvement of composition abilities. Two controlled experiments lend support to this view. Buxton (1958) made a careful study of the progress of 257 college freshmen, using the Mechanics of Expression and the Effectiveness of Expression parts of the *Cooperative English Test*. He employed three equated groups of approximately 85 each. The control group (C) was taught the same subject matter as the other two groups. Members of the second group (W) wrote 500-word essays weekly for 16 weeks and received them back each with only a short paragraph of criticism. Members of the third group (R) also wrote weekly essays, but received them back with all errors indicated and with commentary on each paper as a whole; this group devoted from 30 to 50 minutes of class time each week to discussion and revision. The first and final essays were independently evaluated by two experienced teachers of English. The reliability of the scoring by these teachers was .90. The results indicated no differences among the three groups with regard to the Mechanics of Expression part of the test. The Effectiveness of Expression test scores of both the R and W groups

were significantly higher than those of the C group. However, the R group, which devoted much time to discussion and revision, was superior to the W group on such matters as title, introduction, sentence variety, fluency, and diction. There was no indication of superiority of any one group over another in critical thinking, originality, or organization.

Pippert (1959) examined the mechanics of written language of graduates of four Wisconsin high schools immediately before, and five years after, graduation. In this study the girls made significantly fewer errors than boys in both the earlier and the later scores. The predictive efficiency of the scores ranged from 3 to 11 percent, with correlations ranging from .23 to .45. In other words, if the measures were both valid and reliable, it is not possible to make accurate predictions of future performances on the basis of high-school test scores. Incidentally, the most common errors of all four groups had to do with capitalization, end punctuation, separating sentence elements, and spelling.

One of the most interesting new developments in the teaching of composition is the use of lay readers of students' writing. Diederich (1960), for example, reported on a plan for reducing class size. The National Council of Teachers of English, along with state organizations of teachers of English, suggested a total load of 100 pupils per teacher, in order that more supervised writing might be made possible. Diederich thinks that the load of the teacher of English will increase rather than decrease, and that unless drastic changes are made students will write, on the average, not more than four papers a year. He noted that it takes 33 hours to grade and correct 200 papers at the best rate good readers are able to maintain. He observed that whenever the teacher's load has approached this 200-students-a-day figure, the average number of papers written and corrected per year has approached four. Under the Diederich plan, supported by the Ford Foundation and developed by a 1959 workshop, the high-school English teacher meets no more than 25 students at a time. Of the five periods typically available per week, two are devoted to "free reading" and one to a test and a follow-up of self-correcting homework. The free reading is done in groups of more than 200 students in temporary buildings designed for that purpose and is directed by teams of specially qualified college-educated housewives. Students write a paper every two weeks. In the course of a year, three-fourths of a student's papers are read by college-educated lay readers, one-fourth by regular teachers of English. The issue presented by the Diederich study is whether conventional practices, with generally reduced class size, shall continue, or whether ingenious compromises are to be made as the expected increases in school enrollments occur.

In a series of studies of children's creative writing, Edmund (1958a, b, c, d; 1959; 1960) undertook to find the relationship between children's writing and their prior experiences, their interests, and their personal problems and fears. These studies were also discussed in the *Elementary*

School Journal (1957). On the question of prior experiences, the children in grades 5, 7, and 9 appeared to write more creatively from *derived* experiences (that is, those encountered in reading, radio, TV, and the like) than direct personal experiences. The tendency to employ direct experience in creative writing increased as the children moved up in the grades. Edmund properly suggested that pupils be taught to make greater use of direct personal experiences. In another study, involving fifth-grade pupils, he found that only 20 percent made use of their general interests as topics for themes. The problems which the children listed, and which nearly all ignored in their writing, included (a) failing school work, (b) getting along with siblings, (c) making and keeping friends, (d) appearance, and (e) shyness and nervousness. The fears which these children admitted but did not write about included (a) darkness, (b) failing school work, (c) snakes, (d) dogs, and (e) death and personal injuries.

Edmund further surveyed the writing interests of 187 pupils in grade 7. The children's interests were distributed as follows: 25 percent in trips and travel; 20 percent in adventures; 13 percent in pets or animals; 10 percent in ghost stories; 9 percent in fiction; others in miscellaneous topics. Edmund concluded that most children are capable of choosing subjects independently.

In two articles, Fitzgerald (1959a, b) discussed the use of prefixes and suffixes as means of introducing children to new words to employ in their writing. His analysis revealed that about 840 words (more than 31 percent of the 2650 basic writing words) are derivatives formed from base words or roots by the addition of simple suffixes. Fitzgerald points out that the need for derivatives formed from prefixes increases greatly from childhood to adulthood, when about one-fourth of the writing vocabulary is made up of prefix derivations.

Additional References: Adler (1959); Callahan (1959); Kraus (1959); McIntire (1958); Smith (1960); Wittick (1960); Witty (1957); Witty and Blumenthal (1957).

The Evaluation of Writing Abilities

Little substantial evidence has appeared within the last three years to indicate progress in the objective evaluation of students' writing abilities. At least one study is of interest. French (1957) reported that although essay tests of English composition have been found to be somewhat less reliable and valid than objective tests, many teachers believe that essay tests are justified on grounds other than prediction of success in college English. French also found that, in the opinion of teachers, (a) writing practice has increased in the schools in the last 10 years and (b) the essay test of the College Entrance Examination Board has not been responsible for any change in their methods.

Additional References: Grissom (1959); Scales (1958).

The Teaching of Grammar and Usage

Apparently the scholarly articles and books which set forth the descriptive or "usage" principle of language have not yet made headway among high-school teachers of English. Pooley (1957), for example, conducted a poll of 20 experienced teachers of English from various parts of the United States, including chairmen of English departments in high schools, supervisors of English, and past and present officers of the National Council of Teachers of English, in an effort to secure their estimates of teachers' attitudes toward grammar, as reflected in classroom practices. He reported that "the majority of teachers hold the view that 'grammar is the means to improved speech and writing. . . . Grammar skills are best gained by learning the parts of speech, the elements of the sentence, and the kinds of sentences. . . . Drill and practice from textbooks and workbooks establish grammar, which will then function in composition'" (p. 51). A survey by Womack (1959) confirmed Pooley's findings. Items taken from the Leonard study and other scholarly sources were included in Womack's questionnaire. Womack reported that teachers of English feel obligated to hold a conservative view of questions of usage and language change, and he gave abundant evidence of this conservatism among them.

Kraus (1957), comparing three methods of teaching sentence structure, confirmed the findings of two generations of investigators. Working at the Eugene, Oregon, high school, she set up six experimental classes in grade 11 for the purpose of determining which of three methods was superior in helping students to express their thoughts clearly. The first method consisted of the logical presentation of five units on sentence structure. No original writing was required. All activities were concerned with the study of sentence structure. In the second method, the same procedure was followed, except that students wrote weekly themes which were not discussed with them after the themes were returned. In the third method, all items involving sentence structure were taught in connection with errors made in the writing of weekly themes. In all three methods the following aspects of sentence structure were studied: completeness, co-ordination, subordination, clarity, and effectiveness.

Kraus found that all three methods resulted in significant gains in the ability to choose correct alternatives in punctuation and usage, but that the third method attained its objective in one-third of the time required by the others. She concluded that effective teaching involves (a) explanation of sentence structure in relation to the idea to be expressed, rather than grammatical rule; (b) opportunity for students to work on the items most difficult for them; (c) discussion with students about experiences on which they are to write; and (d) teaching elements of sentence structure for which the student's writing indicates a need.

Additional References: *Baltimore Bulletin of Education* (1959); Monk (1958); Ridgway (1959); Sexton (1959).

Linguistics in the English Program

The controversy over "structural grammar" continues. The structural approach, developed earlier by Fries, Whitehall, Roberts, and others, studies the English sentence from the point of view of pattern, word order, and formal clues. It departs sharply from the earlier and still dominant practice of employing the concepts, categories, and terminology of Latin grammar.

Mallis (1957) used the "patterns" method in his high-school junior English class. His purpose was (a) to help the slow students and those with little grammar background over the psychological hurdle, (b) to review fundamentals for the forgetters, and (c) to challenge the superior students with a new way of handling material they already knew well. He reported that, as a result of 15-minute daily lessons, the students' writing became clearer and more vivid; slower students discovered a framework within which they could develop a complete thought; and students took greater care in stating ideas. Similar favorable results for the new grammar were reported by Senatore (1957). He cited particularly the advantage of the reduced number of grammatical terms which a student must learn, identify, and use.

Alva (1959) found that about 4 percent (120) of the teachers in 88 high schools of California were using the method. Most of these teachers had had one or two college courses in linguistic science. Many of them combined the traditional and the descriptive approaches. Slothower (1959), studying the extent of use of structural linguistics in English-language courses for prospective teachers of English, found that among American colleges requiring grammar study of prospective teachers of English, 22 percent reported giving "considerable" attention to structural grammar; 9 percent, or 20 institutions, reported exclusive use of the structural approach. Since usable replies were received from 91 percent of the 395 institutions addressed, these percentages are significant. In view of the recency of the structural-grammar movement, they appear high.

Additional References: Malmstrom (1958); Marckwardt (1958); Simonini (1958); Williams (1959).

The Teaching of Handwriting

In addition to the general summary of research on handwriting by Herrick (1960), numerous studies were published. Two dealt with the question of cursive and manuscript handwriting. Freeman (1958), surveying cities with a population of 10,000 or more to determine present practices, found that, although in most school systems the changeover from manuscript to cursive is made in grade 3, a sizable minority makes the change in grade 2. Foster (1957) compared cursive and manuscript writing of middle-grade children who had made the transition from manuscript to cursive in grade 3 or later. He concluded that (a) manu-

script writing is slightly more legible than cursive; (b) children who write legibly in one style write legibly in the other also; (c) children write more rapidly in cursive than in manuscript; (d) children in the middle grades increase rapidly in rate of writing by either style.

Harris and Rarick (1957, 1959) found that an individual's use of his normal rate of writing results in a minimum of "point pressure" and greater legibility. Enstrom (1957), using data from questionnaires answered by a large sample of teachers, found that 11.14 percent of pupils (12.5 percent of boys, 9.7 percent of girls) write with the left hand. Quint (1958), studying 626 children in grade 6, found that children of high IQ dislike handwriting practice less than those of low IQ; that aversion to the act of writing is related to motor ability; and that there is no significant difference in attitude toward handwriting between right-handed and left-handed children.

Types of personal handwriting of children in grades 6 to 9 were analyzed and classified by Seifert (1959). One-third or more at each grade level showed evidence of a personal style. Of those who used the personal style, the mean speed scores ranged from 60 letters per minute in grade 6 to 88 letters per minute in grade 9. There was no correlation between motor co-ordination and personal style or between intelligence and personal style, except among some ninth-grade pupils who apparently showed a relationship between intelligence and a personal style of handwriting.

Templin (1959) studied the legibility of the handwriting of 454 adults trained in three styles: all manuscript, all cursive, and manuscript-cursive. She found that most males, once exposed to the manuscript style of handwriting, continue to make use of it in their adult lives. She questioned the efficacy of our dual system of handwriting instruction. Likewise, Hildreth (1960), in a detailed summary of research on the subject, favored retention of the manuscript style throughout the grades. Both Templin and Hildreth emphasized the continuing importance of handwriting and stressed the need for careful, systematic instruction if a changeover is made to cursive.

Harris and Herrick (1959) studied middle-grade children's judgment of handwriting. They found that the ability of children to rank handwriting scale samples in correct order appears to vary directly with intellectual level, the bright group being the most successful. The children as a group seemed to have an inadequate perception of the relative readability of handwriting scale values, although they had had several years of handwriting instruction.

Additional Reference: Kaplan (1957).

The Teaching of Spelling

There is a widespread belief that spelling abilities can be markedly improved by greater emphasis on sounding approaches. E. Horn (1957),

however, pointed out the serious limitations of this emphasis on the basis of his study of 10,000 words from his *Basic Writing Vocabulary*. The great variety of accepted pronunciations and the numerous ways in which such letters as the long *a* and long *e* sounds are spelled interfere with the use of phonics instruction in spelling. Instruction should be limited to sounds without many exceptions in common spelling.

T. Horn (1958) surveyed the evidence on numerous practical questions, such as: (a) Is test-study or study-test superior? (b) Should there be special spelling periods? (c) Are words more readily learned in context? (d) Should study of spelling be associated with study of meaning?

Rudisill (1957) studied the interrelations among phonic knowledge, reading, spelling, and mental age. She found high intercorrelations among reading, spelling, and phonic knowledge—about .70—but lower correlation between mental age and any of these factors—.52 with reading, .29 with spelling, and .42 with phonic knowledge. Kromann (1959) examined 421 fourth-grade children to determine the speech and auditory characteristics of children who showed discrepancies between reading ability and spelling ability. She found a positive relationship between auditory abilities and amount of discrepancy between reading and spelling, and recommended that auditory abilities be carefully appraised in the diagnostic procedure.

The increased use of television in education has raised questions about its value in the teaching of spelling. Phillips (1959), using 12 fourth-grade classes, reported no significant gains for the TV groups as compared with those taught by conventional methods. Lessons in proofreading yielded more favorable results in a study by Goss (1959). Employing a series of proofreading exercises with experimental groups in grade 5, he concluded that children who had had systematic teaching in proofreading made significantly greater gains in spelling than did the control groups.

Bloomer (1959), using 20 fourth-grade classes to determine the usefulness of drill in discriminating between words which have small differences, found that such drill appeared to be effective. Rea (1958) tested the relative effectiveness of three methods of teaching spelling with second-grade pupils. Three matched groups—one taught by "haptical" (presumably kinesthetic or tactual) training, another by visual imagery, and the third by oral-aural methods—were compared. There was a significant difference in favor of the oral-aural method with respect to transfer of learning. In general spelling ability, however, the three methods brought approximately equal growth.

Additional References: Chase (1958); Holmes (1959); Hopkins (1957); McSweeney (1959).

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CHAPTER VI

Literature in the Secondary School

G. ROBERT CARLSEN

IN SETTING up objectives for literary study, educational theorists swing between two poles: (a) to study techniques of literature and the facts surrounding its production and (b) to produce through literature a series of controlled responses in students that will culminate in basic concepts about human living, relationships, and understandings of the role of man. The central problem of whether literature has educational value in either frame of reference still is without substantiation from research studies.

Status Studies

Jewett (1959) studied patterns of instruction in literature in the junior and senior high schools as they were presented in 285 courses of study and compared them with a comparable study made by Smith in 1932. Use of the thematic unit of organization has increased tremendously in the junior high school. In grade 7, units centered in teen-age interests in animals, adventure, and the like; in grade 8, in American life and history; and in grade 9, in personal problems and social development. There was indication of growing use of thematic units at the senior-high-school level. The study of American literature in grade 11 was the most nearly standard course. Twelfth-grade courses showed as wide diversity as eleventh-grade courses showed similarity; but there was a trend toward world literature, and an organization around philosophical ideas.

Moulton (1959) examined the professional writings from 1925 to 1955 on the teaching of literature. She classified treatments of the subject in two categories: (a) as a humanistic discipline and (b) as training for citizenship. The recommendations strongly favored the second point of view. Of the 161 descriptions of classroom practice examined, only eight were reports of controlled experiments. Controlled experimentation is needed to determine objectively the real outcomes of varying emphases in the teaching of literature.

Stensland (1958) reviewed articles and professional materials, printed since 1950, on the teaching of poetry. The objectives of teaching poetry most often mentioned were to increase vicarious experience, to provide enjoyment, and to give moral training. In spite of these stated objectives, the methods most usually recommended were the study of historical and literary backgrounds, the study of versification, the discussion of the experience or theme of a poem, and the study of meaning through such processes as defining words, unraveling figures of speech, and explaining

allusions. Stensland's review highlighted the incongruity between the objectives sought and the methods used.

Hand (1959a) attempted to ascertain practices and beliefs of teachers in Michigan high schools in connection with the use of modern novels. Teachers reported more frequent use of contemporary fiction for outside reading than for classroom instruction. One-fifth believed that unfavorable attitudes toward the use of contemporary novels existed in their communities or schools.

Squire (1960) reviewed the research on the nature and extent of readership. He concluded that good literature has become increasingly available and is being purchased in larger quantities than ever before. Though readers generally comprise but a small segment of the adult population, there has been steady increase in the amount of reading done by young people.

Developmental Patterns

Under a grant of money, scholars from four organizations—the American Studies Association, the College English Association, the Modern Language Association, and the National Council of Teachers of English (American Studies Association and others, 1959)—prepared a statement of issues in English teaching. In literature, they asked: Should certain authors, if not specific works, be required at each level, or should the study of particular genres or literary types be established for each level? When is it most appropriate to practice rigorous textual analysis? To employ the historical and sociological approach? To relate the work to the history of ideas? How and when should a student acquire a vocabulary of technical terms and knowledge of critical concepts about literature? How is the student to acquire the requisite background about mythology, historical events, and Biblical allusions for understanding literature? Running through the questions of this group were two implications: (a) that literature is a humanistic discipline to which children are to be subjected and (b) that there is a developmental pattern in literary appreciation.

Two studies attempted to define steps in appreciation. A committee of the Oakland Public Schools (1960) defined sequential stages in poetry appreciation: Level I: enjoyment of rhythm, melody, and story; Level II: appreciation of seeing one's own experiences mirrored in poetry; Level III: projection into a world other than that in which one lives; Level IV: understanding of symbolism and hidden meanings; and Level V: sensitivity to patterns of writing and to literary style. Early (1960) defined stages of growth in literary appreciation as (a) unconscious delight, (b) self-conscious appreciation, and (c) conscious delight. She demonstrated that these follow one upon the other and suggested means by which the teacher can lead young people from one level of appreciation to another.

The Effects of Literature

Russell (1958) pointed out that no really conclusive evidence shows that what is defined as courage in a particular book will be an image of courage to the child reading the book or will motivate courageous action in the child's life. He demonstrated that much reading matter has by itself little effect on a person's deeper layers of feeling and behavior. A book acts, if at all, in a matrix of conditions and causes. Thus discussion about the inherent values of a particular book is quite beside the point. Reactions depend upon the kinds of content in the reading materials *and* upon the background, interests, and personality patterns of the individual reader.

The overwhelming conviction, even though not demonstrable through research, that literature does leave a residue of impressions about human beings and their lives and that it does have some impact on values has led to analyses of bodies of literary material. Carlsen and Grimes (1959) analyzed the picture of Texas given in novels written for adolescents and set within the state. In most, the action took place on a ranch, in western Texas. It seemed probable that a child gaining his impression of Texas from reading such books would develop a highly stereotyped picture of the region.

Gleason (1958), examining the "talking" characters in anthologies used in Catholic schools, found them usually Caucasians, mostly upper class. Non-Catholic Christians prevailed in non-Catholic texts, whereas Catholics prevailed in the Catholic editions. Rural and urban characters were equally represented, but the rural characters more often tended to be illiterate and more often exhibited positive character traits than did the urban characters. Carpenter (1957), studying the picture of the adolescent in American fiction, pointed out that he was treated either as a confused individual simply waiting for maturity to bring him light or as the symbol of the confused characteristics of our total society. Shepard (1958) studied the treatment of characters in popular children's fiction as representatives of particular ethnic, religious, and socioeconomic groups. Smith (1958) found little in the children's literature of foreign countries that would give American young people a picture of contemporary daily life in those countries.

A major controversy went on about use in the classroom of literature that presents pictures of individuals who transgress the moral precepts of society. Calitri (1959) demonstrated that the individual adolescent lives in a world in which he personally knows both human goodness and human badness, and every mixture between. In a world of confusion, literature should serve, if not as an arbiter, at least as a medium which invites students to discuss openly the problems of human experience. As such, it cannot be selected because it presents only one narrow range of human life: the good. Hand (1959b) attempted to discriminate between the passage of text that evokes open group examination and the passage that sets up secret imaginings and longings in the child. With regard to selecting

literary materials suitable for the classroom, Cook (1957) saw books as fulfilling three functions: (a) Each selection must have some teaching value, a value that can be named even though it cannot be measured; the value may stem from experiential content or from aesthetic understandings. (b) Each selection must fit into a plan for a systematic presentation of literary or social values. (c) The selections must be made with due regard to the maturity level for which they are intended.

The Junior Novel

The junior novel has been the subject of great controversy among educators. Is it literature in the real sense of the word, or is it simply filler reading which should be discouraged in the classroom? Dunning (1959) analyzed 30 highly recommended junior novels against literary criteria such as style of writing, characterization, and theme, and against social criteria such as the adult role portrayed and the adult-adolescent relationships. He found that the books could be used for teaching how to read, judge, and enjoy fiction. They could serve students in establishing their own criteria for literary satisfaction. The literary importance of books written for adolescents was further supported by two critical examinations of the field. Burton (1959) and Hanna and McAllister (1960) discussed the variety of offerings and standards for evaluation.

Reading Skills and Literature

Pooley (1960) pointed out the merging concerns of literature and reading as children pass the beginning stages of reading. Ramsey (1957) set up experimental classes in literature in which each selection was carried through four phases: (a) an introduction to the selection, (b) interpretation, (c) work on skills needed for word analysis and vocabulary comprehension appropriate to the selection, and (d) extension of interests through supplementary reading. The experimental groups showed statistically significant gains in vocabulary, speed of reading, comprehension, and word-attack skills for all levels of students and both sexes.

A similar study with similar findings was reported from the Houston schools by Reeves (1958). For experimental classes at the junior-high-school level, effort was toward developing adequate libraries, grading and classifying library resources to provide for effective guidance, and making assignments according to the ability level of students. She found that all students gained in reading skills; however, the most able made the greatest gains. These studies indicated that reading skills can be enhanced through the study of literature without making the piece of literature simply a vehicle for reading practice. At the same time they indicated that the literature teacher must consciously teach for reading improvement.

Teaching Literature

In an attempt to develop literary appreciation, Williams (1958) used demonstrations, criticism of literary works, the listing of criteria for literary evaluation, and practice on the *Carroll Prose Appreciation Test*. Sensitivity to literary qualities was enhanced through focusing direct attention on it. The study did not attempt to discover the degree to which such apparent sensitivity remained purely on the verbal level or how much it influenced the selection of literature by the student outside the classroom. Collins (1959) studied the difference between comprehension of short stories of varying difficulty when junior-college students read them silently and comprehension when they read them aloud. He found that in every classification there was some difference in favor of the oral reading. The greatest differences occurred at the easy and difficult ends of the continuum.

Conclusions

Research in the teaching of literature during the past three years tentatively suggests (a) that literature is increasingly being considered a medium of communication, its function in the schools being to awaken young people to ideas, experiences, attitudes, and feelings—and such an emphasis seems to be prompting the adolescent to read more; (b) that often the literature presented to young people presents a limited view of human life; (c) that literary appreciation grows by developmental stages which can probably be scientifically determined; (d) that reading skills can be furthered by the teaching of literature, provided some direct attack is made.

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CHAPTER VII

Literature in the Elementary School

JEAN M. LEPERE

RESearch in the field of children's literature during the three-year period under review was characterized more by dearth than by abundance. Articles on various aspects of children's books, authors, and classroom activities filled the journals, but few reflected well-organized research design.

The most significant studies were those which dealt with (a) attempts, based on sound research principles, to ascertain reading interests and tastes of children and (b) the influence of literary experiences on the psychological functioning of the individual. Some reported efforts at individualized reading instruction, but few based choices of materials on judgments of children. Adult judgments of literature for children seemed still to prevail in selection and utilization.

Children's Reading Interests

The most comprehensive research on children's reading interests was reported by Norvell (1958), whose study included findings based on approximately 960,000 expressions of opinion of more than 24,000 children in grades 3 to 6 in all sizes of schools in New York State. Some conclusions were based on an augmented sample using data from the same geographical area. These data, with what were gathered earlier, brought the total sample to more than 4 million expressions of opinion from 124,000 children. Twenty-five hundred teachers assisted in the study, which was in process for more than 25 years.

The aim was to devise a procedure for data collection for classroom teachers which would yield results that could be combined with other independent studies carried out by the same procedure. Further aims included devising ways to determine (a) the number of pupil reports on a given literary selection necessary to yield a dependable reading-interest score; (b) the effect of age, intelligence, and sex on interest factors; (c) the influence on children's interests of adventure, humor, and romantic love in selections; (d) the effect of quality of teaching on reading interests; and (e) change from grade to grade of children's enjoyment of literary materials. Methods of collecting, processing, and interpreting the data were explained in detail. Carefully controlled statistical procedures were employed to assure reliability of results.

The study included major conclusions regarding reading interests of children: (a) The degree of a child's maturity exerts a major influence on reading interests; as children grow older, the rate of change of interest

gradually diminishes. (b) At many points the sex of the individual plays an important role in his interest in certain selections of poetry, as well as prose. (c) Moderate acceleration of bright pupils and moderate retardation of slow pupils are favorable factors in the reading program in the classroom. (d) Authoritative sources are frequently in error with regard to what children really select and enjoy in literary materials. (e) In grades 3 to 6, Mother Goose rhymes have a wide spread of interest: a few have great attraction for children; most rate moderate or low in interest; and most of the rhymes praised for literary quality rank low in children's interest. (f) Of poets ranked high by adults as poets whom children enjoy, only Milne and Lear are among the 10 most enjoyed by children. (g) Children like vigorous, dramatic, humorous poetry about subjects they know. (h) For both boys and girls, superior students and others, interest in science materials depends on either practical application of principles or inclusion of a dramatic story. (i) With regard to the reading of comics by children in grades 4 to 11, even the unpopular strips are much more widely read than books which rank high in popularity, and some strips unpopular by adult standards are read by children as frequently as many of the more popular ones. Factors aside from interest which were seen as influential in drawing children to the comics were accessibility, drawings, and ease of reading simple words and simple ideas.

On the basis of the findings, Norvell gave suggestions for making the reading program a success in the classroom. He included a comprehensive tabulation of the data which should be helpful in the selection of materials. The most significant contribution of the work was its deflation of many old myths about the "right book for the right child at the right time" by means of painstaking and scientific research principles applied to the reading interests and attitudes of children. Because the data were gathered over a 25-year period in a limited geographical area, generalization of the conclusions to current reading trends should be made cautiously.

In spite of the evidence cited by Norvell (1958), Jefferson (1958) concluded that groups of parents estimate reading preferences of groups of children very accurately. In an almost contradictory vein, however, a further conclusion noted that parents may overestimate or underestimate children's interests in some particular selection. He also observed that parents have a keen appreciation of sex differences as a basis of children's literary choices. Much further research is needed in this particular regard. Landau (1957) observed agreement between children and experts. Eleven specialists were asked to list 25 books in order and in groups of five, from funniest to moderately funny for 11-year-old or 12-year-old children. After tabulating the ratings of 120 children, he noted: "It would appear that when the experts recommend a humorous book, children heartily concur" (p. 563).

Responses of very young children to storybooks were reported in studies by Cappa (1958) and by Amsden (1960). The spontaneous responses of over 2500 kindergarten children in California were observed by Cappa.

The most-noted spontaneous response to reading by the teacher was the desire to look at the book read. The least-noted response was block play, which would probably indicate the highest level of abstraction. There were numerous requests to have the story told or reread by the teacher. Other responses were drawing, painting, dramatic play, story told by child to other children or dolls, and clay modeling. Approximately one-third of the responses were verbalized; the others were observed as overt actions. The level of abstraction in the response could well provide kindergarten teachers with clues to readiness for academic school activities.

Amsden's investigation (1960) was designed to discover three-year-old to five-year-old children's preferences in illustrations and story subjects. Sixty boys and girls from three nursery schools were involved, with 10 girls and 10 boys in each of the age groups. Two sets of 10 illustrations with identical content were utilized to determine the amount of color, value of color, and style of drawing preferred by preschool children. Photographs were used, and line drawings were made from each photograph and painted according to the variable to be tested. The investigation led to a number of tentative conclusions: (a) Generally, young children might be inconsistent in their picture preferences, but a significant number did make consistent choices. (b) There was no significant difference in choice of pictures related to sex, socioeconomic status, research population, reading habits in the home, or alertness or activeness of the child. (c) A significant bias, which tended to increase with age, was noted for a picture placed on the right. (d) Five-year-old children tended to make more stable choices on retests than three-year-old and four-year-old. (e) Light tints were preferred to saturated colors. (f) Photographs were preferred to black-and-white line drawings. (g) Though not to a significant degree, fanciful pictures were preferred to true-to-life drawings and to modified realistic drawings. (h) Three-year-old children showed more preference for modified realism than five-year-old, who preferred true-to-life drawings. (i) Illustrations with most colors were most preferred. Black-and-white photographs were equal in preference to single-color line drawings. Similar studies are needed in the elementary school, where illustrations play an integral role in the use of books. The following step would be to determine how picture preferences relate to conveying meaning.

Such a study was reported by Bloomer (1960), who observed reactions of 336 children in grades 4, 5, and 6 to picture style and theme. He drew the following conclusions: (a) Stimulating qualities of different picture themes provide a better basis for selecting illustrational style and theme than do picture preferences. (b) Line drawings with negative-tension themes related to the subject should be utilized when pictures are intended to stimulate interest and produce realistic thought about a subject. (c) Color pictures stimulate fantasy best. (d) Further experimentation seems warranted to determine the personal and environmental factors which predispose a child's responses to pictures. Browman and Templin (1959), in an exploratory study, compared 25 stories recommended for

preschool and primary-school children in 1927-29 with 25 recommended in 1952-55. In present-day stories, realistic, everyday environment was more prominent; stories about fairies and animals who behaved like human beings were fewer; and the number of adults as main characters had increased from 19 percent to 29 percent. About one-fourth more behavior situations appeared in the 1952-55 group, but similar behavior was rewarded or punished in both periods. It was concluded that stories reflected the times when they were recommended and that both continuity and change were apparent. Greatest change in story content reflected modifications with regard to general environment and philosophy in dealing with children.

The Role of Interest and Trade Books for Children in Individualized Reading Instruction

Educators became more fully aware of what appears to be a great need to individualize reading instruction. Many studies have revealed rather interesting adventures on the part of teachers but failed to follow through with really sound analyses of their programs. One such study was reported by Millman (1958), whose sixth-grade pupils often found basic reading stories boring. When they selected from various sources, they were able to evaluate materials and to build a wider background of reading skills through interest and sharing. Her report, however, like many others in the area, lacked the statistical data of a true research project. Much valuable research data could be provided from such experiments if teachers would approach the problem scientifically.

More studies are needed like that reported by Hogenson (1960), in which a control and an experimental group, each consisting of 25 sixth-grade pupils, were set up to determine the role of interest in improving reading skills. The median IQ of the experimental group was 108, with a range from 92 to 124. For the control group, the median IQ was 109, with a range from 80 to 120. The experimental group's interests were mainly adventure stories, mysteries, and family stories. Each child read as many books as he could during the 16-week study. The experimental group made significantly greater gains in reading comprehension, reading speed, and vocabulary development. The average total reading gain for the control group was 0.4 of one year, and that of the experimental group, 0.8. A significant correlation coefficient of .70 was obtained between the number of books read by individual members of the experimental group and gains made in reading skills.

Trade books for beginning readers had attention. Condit's (1959) study at Rutgers University dealt with selection of trade books for first-grade and second-grade children with normal interests and no special problems. Sixty-one children's book editors of firms represented on the Children's Book Council were requested to submit lists of books they deemed suitable

for independent reading by beginning readers. Many other sources were searched, and, out of 759 titles gathered and reviewed on the basis of the child and his interests, vocabulary, and format, 151 were selected. The 151 selections were graded by the Spache formula for readability and were tested with 99 children. From children's choices and librarians' evaluations of titles, a bibliography was developed. Approximately 5 percent of the 151 titles were judged readable by first-graders, but, of these, 63 percent were intended for superior readers. Of the rest of the books, 71 percent were judged suitable only for superior second-grade readers. The study revealed the lack of suitable trade books for beginning readers and pointed up the need for more. A complete annotated list of the selected materials was included. This study represented one of the few in which librarians had gone to children to develop recommended bibliographies.

Extraneous Influences on the Reading Interest of Children

Television and comic strips were considered as usurpers of reading time. A serious attempt to determine the relationship between certain television-watching and reading habits of children and selected behavior traits was undertaken by Perrodin (1960). *Behavior Preference Records* and personal data sheets from 352 children in Southern elementary schools in grades 4 through 8 disclosed that more than half watched television for more than 20 hours a week. Those who watched least showed the greatest preference for non-co-operative behavior. Television watching bore little relationship to preference for leadership. Children who preferred adventure television shows (which were more popular than comedies, musicals, or Westerns) showed a greater preference for non-co-operative, nonfriendly, and nonleadership behavior. Almost half of the children had read more than 20 books during the preceding eight months of school. Those who had read fewer than 10 ranked below average on co-operation more frequently than those who had read extensively. Most of the children preferred fiction. Science readers evidenced non-co-operative behavior; those below average in friendliness preferred biography; and those below average in leadership preferred fiction and biography over science and historical material. An extreme liking for "funny" comic books was expressed by most of the children, but for those who ranked below average in co-operation, friendliness, and leadership, the "non-funny" comics were preferred. Better readers showed a greater tendency to prefer non-co-operative and nonleadership traits.

Witty and Kinsella (1958), reporting the ninth in a series of studies since 1950 designed to ascertain the amount of time children devote to television, observed: "From these and other investigations, it appears that children are reading somewhat more at the present time than before television came to their homes" (p. 455). Seventy-nine percent of the children

in the Evanston study reported that their teachers offered guidance and valuable suggestions for televiewing. Many times they were guided to the book associated with the television program. From these studies it might appear that television could well be providing a stimulus rather than a deterrent to reading.

That children are still reading comics seems certain, but the evidence cited by Slover (1959) indicates that the threat of comics to good reading habits is not so great as has been suspected. Slover found the majority of fourth-graders reading comics, but the best readers and more intelligent of them chose better reading material and left the comic-book stage.

Bibliotherapy

Significant research in the field of bibliotherapy was still scant. A fairly comprehensive review of research and literature dealing with bibliotherapy as it involved the utilization of books to aid in the solution of problems of the emotionally disturbed was presented by Darling (1957). He listed 15 references dating from 1940 through 1955.

Literature and Psychological Functioning

The most significant research on childhood literary experiences as they relate to the psychological functioning of the individual in later life was reported by Collier and Gaier (1958a, b, 1959). Earlier they (1958a) observed that "psychologists have tended to neglect the field of children's literature as an area of interest to themselves or, indeed, even to children" (p. 97). The study was one of a series planned to explore the responses of children to their favorite stories at several stages of development. Stories which college students had preferred in childhood were evaluated in retrospect. Women chose stories stemming from the Oedipal period in which evil-mother figures, benign but active males, and persecuted, passive young women were involved. Men preferred stories encountered independently during the latency period with themes of adventure, problem solving, and self-assertion. For the male, story endings were reality oriented, and women figures were rare but kind and maternal when they did appear. Collier and Gaier's conclusion was that the type of story preferred and manner of reporting reflected cultural and biological sex-role expectations.

Collier and Gaier (1958b) disclosed that college women chose as their favorite stories fairy tales which were most frequently encountered at or before the age of six years, again with the story elements noted above. Among college men Collier and Gaier (1959) found a childhood preference for fictional, fairy, animal, religious, and biographical stories (in that order). Except for animal stories, the leading character in all stories was a human male, usually adult, and often solitary. They pointed out that the findings were consistent with Benedict's notion that popular stories reflect

cultural role expectations. At least three conscious wishes were seen as being shared by the subjects and as being vicariously satisfied in the stories: (a) to be conspicuously adequate, (b) to be unmistakably male, and (c) to be older than their chronological age.

A further study to test the belief that popular stories reflect cultural role expectations was reported by Gaier and Collier (1960). It was hypothesized that story preferences reflect differences in respective cultural contexts, as well as sex differences. Preferences of fourth-grade and fifth-grade American school children in New Jersey were compared with those of Finnish elementary-school children in Helsinki. Several findings emerged: (a) There appeared to be no one generally popular story. (b) Fiction was preferred over fairy tales and over informational, biographical, animal, or religious material regardless of culture or sex. (c) Similarities in taste both cross-culturally and sexually bore out the psychoanalytic assumption that, during the latency stage, the child turns his attention to all kinds of learning, with particular reference to people, places, and social relationships. (d) All groups selected favorite stories from those recently encountered, the taste of peers being influential rather than that of adults. (e) Happy endings were characteristic of preferred stories. (f) After fiction, girls chose fairy tales with characteristic features seldom observed in favorite stories of boys. (g) Boys chose information after fiction.

Qualitatively and statistically, the data presented by Gaier and Collier (1960) lent strong support to Peller's (1958) belief that, during the latency stage, sex differences in reading interests have been underestimated. In a paper presented at the Panel on Latency, Midwinter Meeting of the American Psychoanalytic Association in 1956, Peller advanced the belief that "at the core of every successful children's book there is a universal daydream" (p. 60). In a discussion of the hero tales, she noted the support they give to the daydream, as the boy in latency fulfills his need to act out fantasies which center about Oedipal wishes and their derivatives. Several references were cited which showed the hero to be an orphan or semi-orphan living with parent (or parent figure) of the opposite sex. Since the hero was an orphan, the boy's Oedipal conflicts were solved with finality and without guilt. The many father figures—as in *David Copperfield* or *Treasure Island*—helped him to solve his ambivalent feelings of love and hate for the same person.

Many of the girl's heroines were also orphans who personified many virtues. Most stories preferred by girls involved secrets (about self), encounters (with males), and unconsciousness—which assisted the female in the daydream of erotic fantasy. Not all girls' books, however, support the feminine daydream. Nancy Drew is an example of a figure who supports the bisexual identification of the girl in latency.

It was pointed out that during the later years of latency both boys and girls anticipated in their daydreams their adult roles. For boys the hero of the story consistently reflected ambitious and aggressive elements which

can reach consciousness; for girls the daydream was more veiled as it centered around erotic elements. Girls partly shared boys' daydreams because of the bisexual identification.

Conclusions

Major concern of researchers during the period under review centered primarily around (a) observed reading interests of children; (b) utilization of trade books in individualized reading instruction; (c) the impact of diverting influences such as television and comics on the reading habits of youngsters; (d) the utilization of literary materials to help children gain insight into the problems of self and others; and (e) the role-function of the characters in childhood stories as it relates to sex, culture, and other variables which influence the psychological functioning of the individual.

Children's reading interests have come to be viewed by researchers more from the point of view of the reactions of children than critical judgment of adults. There is need for further research on reading interests of children at all levels.

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CHAPTER VIII

Foreign Language Instruction

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FOREIGN language instruction grew rapidly in the period 1957-60. This growth was stimulated in large part by increased public awareness of the need for languages and by financial assistance made available through the National Defense Education Act of 1958. A great number of publications dealt with the nation's imperative need for a sound, defensible, and adequate program of foreign language instruction in the schools and colleges. The language-teaching profession concerned itself with (a) audio-lingual learning, especially with the aid of language-laboratory facilities; (b) longer sequences of study; (c) application of linguistic science to language teaching; (d) use of films, television, teaching machines, and other media; (e) study of major neglected languages; (f) preparation of teachers; and (g) development of new methods, materials, and tests.

A representative coverage of bibliographical references was provided for modern foreign languages by Birkmaier (1960), for classical languages by DeWitt (1960), for bilingualism by Manuel (1960), and for English as a foreign language by Ohannessian (1960). Van Eenenaam (1959, 1960) compiled the yearly annotated bibliography of methodology of the *Modern Language Journal*.

Surveys

Numerous studies continued the fact-gathering type of research which characterizes the foreign language program of the Modern Language Association. Childers' (1960) report of national statistics on foreign language offerings and enrollments in public secondary schools, fall 1958, showed gains in 41 states and the District of Columbia since the 1954 survey reported by Mildenberger (1958). The over-all gain in percentage of high-school population, grades 9 through 12, enrolled in foreign language courses was 3.2, indicating a reversal of the downward trend, continuous since 1915, in foreign language enrollments in high school. The percentage of high schools offering one or more modern foreign languages had increased from 43.6 in 1954 to 50.4 in 1958. Huebener (1959), relating the fluctuation of foreign language enrollments in New York City to the international situation and the changing school population, highlighted some current developments: introduction of Russian into the high-school curriculum, continuity of foreign language study in the junior high school, attention to the academically talented. Remer's (1960) partial listing of Russian language offerings in secondary schools as of February 1960

included 400 high schools in 35 states in contrast to nine schools in six states reported by Mott (1957).

Mehling (1959) found that the public gave the teaching of foreign languages, including Russian, high priority in the curriculum and that a majority favored an early start. The National Education Association (1960), noting the importance of foreign language study in fostering understanding of other peoples, found that 43.1 percent of the 269 responding schools offered foreign language in at least one grade of the elementary school. Although the schools sampled were probably not typical, this growth of foreign language teaching in elementary schools suggests that language is expected to supply a tool for communication with foreign cultures and to help create a framework within which another people's way of life may be examined.

Aspinwall's (1960) survey of languages in Hawaii, where six languages in addition to English are spoken by a sizable group of the population and pidgin is the *lingua franca*, showed the total enrollment in second-year high-school foreign language classes to be just half that in first-year classes, and no public school in the state offered the third year of any foreign language. Holding students through the planned sequence is a major problem in building a program of sufficient length. A committee of the 1957 Northeast Conference on the Teaching of Foreign Languages (Fulton, 1958) found, for example, that, in New York City's 54 academic high schools, 25 to 30 percent of the foreign language students continued from the second year to the third and 2 percent continued from the third year to the fourth. An analysis of responses concerning reasons for dropouts in the New York, Boston, and New Jersey areas revealed many facets of the problem, some relating to instruction and others to such factors as community attitudes and college requirements.

The Modern Language Association surveys of foreign language entrance and degree requirements (Wolfe, 1959; Plottel, 1960) showed a slight upward trend both for admission and for the B.A. degree. Of the 899 colleges granting the B.A. degree, 31.6 percent had foreign language requirements for entrance, and 85.9 percent required a foreign language for the degree. The corresponding percentages for 1957 were 28.5 and 84.8. A few institutions had strengthened existing requirements. Comparison between foreign language offerings in the high schools of a state and the corresponding requirements for admission to its colleges indicated that many states were either strong or weak in both high-school offerings and college requirements, whereas in 21 states the percentage of high schools offering foreign languages was conspicuously higher than the percentage of colleges having entrance requirements in foreign languages.

Several current developments in foreign languages, including programs sponsored by private foundations (Atkins, 1960), were studied by a seminar group at the University of Massachusetts.

Welmers (1959) and the Modern Language Association, Center for Applied Linguistics (1960) surveyed, respectively, the major languages

of Africa and the materials for teaching languages of North Africa and Southwest Asia.

Additional References: Carroll (1960); Gaudin (1960); Hall (1959); Heumann and Bernays (1959); Johnston and Seerley (1958); Miele (1958); Mustard and Tudisco (1959).

Methods and Materials of Instruction

Are well-motivated, persevering students able to achieve more by traditional methods or by using a language laboratory? Politzer (1960) sought information on the relation of student effort to achievement and the contribution of the language laboratory to student achievement by comparing 250 first-semester French students taught at Harvard without laboratory practice and 396 first-semester French students taught at Michigan with laboratory practice. At Harvard no one of the "hard workers" among the poorer students made his way into the A group, and quite a few failed in spite of their effort; at Michigan very frequent laboratory attendance enabled some students of lesser aptitude to achieve an A in the course, and no one of those who spent a large amount of time in the laboratory ended up in the D/E group. Politzer concluded that one of the most important functions of the language laboratory is to give the individual student the opportunity to make his learning effort count.

The effectiveness of electro-mechanical aids, whether or not installed in what is usually called a language laboratory, would seem to depend upon the program which the teacher supplies. Morton (1960) cited a pilot experiment at Harvard in the use of specially designed instructional materials to permit unselected beginning students to acquire aural-oral fluency in Spanish. The theory that learning is facilitated when the student proceeds through a carefully sequenced and reinforced series of small steps was applied in the construction of course materials. These consisted of hundreds of exercises in the discrimination and accurate reproduction of significant speech sounds and on grammatical elements, plus (a) drills to enable the student to respond meaningfully to model patterns using 1500 vocabulary items and (b) drills and tests for passive recognition of 1000 additional lexical items. With 83 class hours of instruction in common, the students worked at their own rate, spending from 249 to 415 practice hours outside of class. All who finished the course achieved aural-oral proficiency equal to that normally reached by students in the third and fourth years. The success of this course provided a concrete, if partial, answer to the question of how to construct programs for teaching aural-oral skills.

O'Connor and Twaddell (1960) applied comparative-linguistic analysis and classroom experience to the production of a teaching script for giving Japanese teachers of English control over the materials to be taught in the first-year English course. This experiment demonstrated (a) the enor-

mous amount of practice needed to form language habits that are truly automatic and usable and (b) the theoretical bases for the development of effective materials and methods.

A number of the newer foreign language textbooks were designed to give initial contact with the language through the ear, to develop the student's use of the language in communication in culturally authentic situations, and to provide a systematically arranged sequence of essential structural patterns with adequate drill materials based on structural contrasts between the foreign language and the learner's native language. A series of such books was produced under the direction of Rojas (1957) for Spanish-speaking students of English in elementary and secondary schools. Bolinger and others (1960) offered a pioneering co-operative effort, with accompanying audio-visual materials, for English-speaking students of Spanish at the college level. Sweet (1957) used a structural approach to Latin. A beginning French course for which cultural-visual materials furnished the basis for the linguistic content was tried successfully in a pilot program by 20 teachers in four universities and four high schools with approximately 1000 students (Borglum, 1958). Scott (1959) analyzed an experiment in preparing literature materials for foreign students of English—an experience applicable to the preparation of foreign language readers for American students.

Numbers of texts and aids for the study of major neglected languages were produced during the period covered by this review, but considerations of space do not permit discussion of them.

Additional References: Barlow (1960); Brooks (1960); Mueller and Mayer (1958); Van Syoc (1958); Wimer and Lambert (1959).

Foreign Language in the Elementary School

Should instruction in foreign language in the elementary school be restricted to selected pupils on the basis of intelligence tests? Garry and Mauriello (1960) found that the Otis Beta group intelligence test correlated so slightly (less than .12) with the achievement of fourth-grade children in French that they recommended providing the opportunity for all pupils. Later selection, if necessary, should be made, they concluded, on the basis of performance and enthusiasm for the second language. The chief purpose of their research, however, was to appraise the effectiveness of a teacher-training program in relation to the children's progress by the end of one year's instruction. The sample treated statistically consisted of 40 fourth-grade classes from nine similar suburban communities in the Boston metropolitan area. The classes were randomly assigned to one of eight categories of 2 by 2 by 2 analysis-of-variance design, the independent variables of (a) instruction, (b) practice, and (c) teacher fluency having two variations each: training of teachers by means of weekly half-hour television programs vs. no teacher training; teacher-prepared and directed

practice vs. recorded tapes of the audio portion of the children's TV programs; and moderately fluent vs. nonfluent teachers.

The effects of these variations upon achievement were measured by a group test, in which each child selected a drawing corresponding to phrases spoken in French, and by individual oral tests given to a random sample of children. Each class was treated as a single case, the mean score on a given test being the score for the class. The total fluency of the children (judged by the combined score on comprehension, pronunciation, and dialogue) was significantly higher when practice was directed by the moderately fluent teacher. Comprehension of spoken French also was better when practice was directed by the teacher, whether fluent or not, rather than by means of the tape recordings of the TV program. The televised teacher-training programs did not produce significant differences in achievement. Televised instruction alone, without regular follow-up work by the classroom teacher, yielded inadequate levels of achievement. This study left unanswered the question of how much better the total fluency would be with practice directed by a highly fluent teacher, as well as the question of how televised instruction, combined with teacher follow-up, compares with programs carried out by a language specialist. Ellison (1960), conducting a similar experiment in Illinois, tentatively stated that televised foreign language instruction is potentially a good substitute for specialist teachers until these can be trained in sufficient numbers to meet the ever-increasing need and demand.

Penfield's (1959) research, showing the readiness of the young child for language learning, had far-reaching implications for foreign language instruction in the elementary school. He concluded that the time to begin general schooling in a second language is between ages four and ten, when the child learns new languages directly without interposing the speech units of his mother tongue. By the normal growth process in the first decade of life, language is learned as a by-product of other pursuits, as a means to other ends—a phenomenon observed by Morrison (1958), who found that "stretching" Puerto Rican children in the real setting of regular classes had marked advantages for teaching them English over giving them special instruction in non-English-speaking groups.

Additional References: Foster and Williams (1960); Hanson (1959); Philippine Bureau of Public Schools (1960); STACO (1959).

Testing and Evaluation

In the course of an extensive investigation of foreign language learning aptitude, Carroll (1958) identified six factors of apparent significance: linguistic interest, associative memory, inductive language learning ability, verbal knowledge, sound-symbol association, and grammatical sensitivity. Following research with experimental tests based on these factors, Carroll and Sapon (1959) standardized an aptitude test of general high validity in measuring basic abilities essential to rapid and facile foreign language

learning from grade 9 on. Although the test was designed primarily for adult and college populations, the results of its use in high school led Carroll (1959) to believe that parts of the test measure functions which do not change greatly from adolescence to adulthood.

Gardner and Lambert (1959), who administered a battery of tests to 75 eleventh-grade Montreal high-school students of French, found that motivation was equal to linguistic aptitude in its relation to achievement ratings. This motivational factor was characterized by a willingness to be like valued members of the foreign language community. Maximum prediction of success was obtained from tests of verbal intelligence, intensity of motivation, students' purpose in studying the language, and one index of linguistic aptitude. Nida (1957-58), through observations and case studies of American missionaries learning foreign language, noted the baffling number of persons who failed despite good motivation, aptitude, and instruction. He advocated further research on psychological factors such as emotional resistance resulting from foreign background, social insecurity, or other childhood experiences affecting learning attitudes.

Additional References: Allen (1960); Ayer (1960); Creore and Hanzeli (1960); Delattre (1960); Dostal (1960); Hascall (1959); Mildenerger (1959, 1960); Stake (1959); Yakobson (1960).

Research in Progress

Within the next few months and years an extraordinary increase in research findings will result from studies sponsored or stimulated by the National Defense Education Act of 1958. A major concern of the Language Development Program, Title VI, was the initiation of research, experimentation, studies, and surveys; creation of specialized materials to improve modern foreign language instruction; and development of tests. In fiscal years 1959 and 1960, \$6.4 million was obligated for such projects. Title VII, although designating no subject field for research, allocated over \$1 million to experimentation with films, audio-visual materials, television, and related media in foreign language teaching during the first two years of the Act. Another potential source of support, to date little exploited by researchers in foreign languages, is the Cooperative Research Program of the Office of Education.

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CHAPTER IX

Mass Communication

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THE MAJOR studies in mass communication selected for review here are representative of research which has important implications for education.

Strategies in Communication Research

In a provocative article, Berelson (1959) contended that the key ideas which gave communication research its vitality 10 to 20 years ago have "withered away" and no comparable ideas have taken their place. He observed four major approaches: Lasswell's (1958) political-historical approach concerned with the identification of symbols of political power; Lazarsfeld's sample-survey approach concerned with the effect of mass media on an audience; Lewin's studies of communication patterns of small groups; and Hovland's psychological analysis of the characteristics of messages, their appeals, and ultimate effects. Six so-called minor approaches included the broad historical view of Riesman and Innis and the mathematical approach, represented by Shannon and Weaver. Berelson predicted a future for communication research in studies of standards of evaluation of the mass media, comparative studies in international communication, the economic analysis of certain communication problems, increased sociohistorical analyses of larger issues such as popular culture, and the general study of mass phenomena, including communication.

Schramm, Riesman, and Bauer (1959) projected a bright outlook for the communication researcher in the answering of such questions as: "Who will make the adequate two-person model of communication we need?" and "Who will clarify the economics of mass communication?" Riesman pointed to the necessity of continued investigation of the impact of media structures on human sensibility and perception and to the pioneer work of Innis and the derivative work of McLuhan (1960) and of Carpenter (1960). Bauer commented that early approaches, such as content analysis, survey research, small-group dynamics, and systematic psychological experimentation, which were used to study the effects of mass communication, have now revealed their advantages and limitations, and concern has shifted from the sharpening of the method to the substance of the continuing problem of effect. Early surveys assumed highly potent effects by media in a mass society and few by small informal groups. As Katz and Lazarsfeld (1955) pointed out, they were ultimately forced to accord a larger role to the effects of informal personal influence, and mass media were seen as reinforcers of these effects.

Combining survey and sociometric techniques, the study of personal communication within a generalized theory of mass phenomena continued as a major line of investigation.

Conflicting results from the field and laboratory again illustrated the difficulty of determining effects of mass communication. Hovland (1959) and others were able to demonstrate readily identifiable changes in attitude in laboratory situations, whereas survey studies indicated conclusively that direct translations of similar "effects" to field conditions were impossible. Both field and laboratory studies have demonstrated the untenability of equating the content of mass communication media with their effects on behavior, a fact which should be of extreme interest to educational researchers, particularly in regard to educational television.

Festinger (1957) pointed out that attitudinal changes often follow behavioral changes; this seems to require investigations of the extent to which communications have capitalized on existing attitudes to produce behavior which, in turn, has produced changes of attitudes. This rubric seems compatible with the phenomenistic hypothesis proposed by Klapper (1957-58) which is generally not concerned with direct cause-effect, media-to-behavior relationships, instead regarding mass communication effects as influences working amid other influences within a total field or situation. Katz (1959), in a similar but more pragmatic vein, proposed a shift in the formulation of research problems from "What do the media do to people?" to "What do people do with the media?"

In an effort to cast broader lines of inquiry for research in mass communication, McLuhan (1960) provided nine testable hypotheses aimed at discovering the subliminal effects of radio, television, film, and telephone, as media forms, on human sensibility and perception. The media were rated as to their structural impact on the human senses in terms of the amount of information filled in by the receivers. If the differential effects of media forms on human beings can be determined, such effects will ultimately have a profound impact on the organization of communication processes and educational institutions within a given society.

In summarizing the contributions of various disciplines to the study of mass communication during a 30-year period, Lasswell (1958) noted that the field of mass communication has been a meeting ground for specialists from various disciplines but has yet to emerge totally as a discipline. He predicted that, as an emerging discipline, research in mass communication will continue to be a captive of university departmentalization unless its development is shared by all those within the university community most concerned with its capacity to provide enlightenment.

Additional References: Adler (1958); Albert (1958); Breed (1958); Cartier (1960); Foshay (1960); Gerald (1958); Gerbner (1958); Greenhill (1959); Jackson (1959); J. T. Klapper (1958); McLuhan (1960); National Education Association and American Association of School Administrators, Educational Policies Commission (1958); Ross and Bastian (1958).

Status of Research Methodologies and Techniques

As information flow increases within mass culture, new conceptual and methodological models are needed to study communication effects upon the organization of a system as well as effects on individuals within that system. Some progress seems to have been made in the refinement of research procedures used to study the effect of communication on human beings. Most of the techniques for the study of mass communication continue to be drawn from survey research. Interviewing continues as a key research tool.

Tannenbaum (1957) reported the further development of survey techniques applicable to study of the structure and functioning of a communication system, with particular reference to role concepts occurring within an organizational hierarchy. Cunningham (1957) reported five papers dealing with a variety of survey techniques, from an automatic-machine procedure for Guttman scaling to improved methods for the collection of household data. Wilson (1958) summarized some technical problems in cross-cultural research in sampling, interviewing, and establishing reliability and validity by means of illustrative examples from ongoing research in India and Latin America. Williams (1959) questioned the common practice of statistically treating similarly categorized responses to mass communication media by different people as if the responses were dynamically equivalent and unmodifiable by the respondent in the light of new learning and the prediction of future consequences.

The sharpening of survey-research tools, such as the semantic differential, by Kaufman (1959) and the bringing together, as Lazarsfeld suggested, of "classic" and survey methodologies by Nafziger and White (1958) opened new doors in the conceptualization of researchable questions in mass communication. The use of both operations research and systems analysis may become more feasible in experimental design.

Research techniques developed in the study of the effects of mass communication have much to add to research methodologies now current in education. Of particular interest is the use of a classroom model projected as a social system to forecast effects of new educational media on learners and teachers, by Riley and Riley (1960). Sondel (1959) also used the communication concepts "feed forward" and "feedback" in projecting a model of the classroom as a social system.

Additional References: Gerbner (1958); Sabine (1960).

Mass Communication Effects on Children

Several key studies indicate the intensity with which the problem of media effects on children is being pursued. A comprehensive study of the interaction between children and television was done by Himmelweit, Oppenheim, and Vince (1958) with children in London, Portsmouth, Sunderland, and Bristol. They matched 927 pairs of children in age groups 10-11

and 13-14 for age, sex, social class, and intelligence. In Norwich they studied 185 pairs of similarly matched viewers before and after television came to that city. Although the study is extremely valuable for descriptive aspects and experimental design, it is important to note that, notwithstanding the large sample and rigorous controls, little was found which could be isolated under the category of television effect. No evidence was found that children were made more passive by television or that defective eyesight was more prevalent among viewers than among controls. Many children were disturbed by danger to animals they liked or to characters with whom they had identified when the danger or violence was especially realistic. Some evidence was found of an "addict" type, not common to television alone. This type of individual consumes large quantities of any available mass medium, selecting family or adventure content to satisfy emotional needs. In this respect the research substantiated experimentation by Maccoby (1951), who discovered the addict type in an earlier study.

Witty and Grothberg (1960), reporting the results of 10 yearly studies of children's television viewing in the Chicago area, found excessive viewing of television associated with lower academic achievement. Some children, however, seemed to be stimulated by televiewing to work of higher quality. Television addicts in the first four grades did not stand out markedly from their age groups and gave no special sign of psychological problems, nor were they underachievers. Witty also found that (a) televiewing has not brought about a reduction in outdoor play, hobbies, sports, and creative activities; (b) heavy viewers did not get substantially different grades from those received by light viewers; (c) relatively few pupils read less and many pupils believed they read more; (d) primary pupils appeared to show gains in vocabulary as a result of television viewing.

Schramm (1960), in a progress report on an extensive study of the child's relationship to television within the family in West Coast, Rocky Mountain, and Canadian communities, reported that, by the age of five, 80 percent of children viewed television and, by the age of six, 90 percent. Three-quarters of all fifth-graders in Schramm's San Francisco sample were viewing television on any given day. In the diaries of these fifth-graders, television filled an average of 145 minutes a day; reading filled 40; radio, 80; homework, 88; and movies (a little less than one movie a week), about 18 minutes. The free-play time, as distinguished from media time, was only slightly more than television time—182 minutes as against 145.

Schramm's preliminary results indicated that in the first 10 to 12 years of a child's life there is a strong tendency for him to pattern his mass-media behavior after that of older members of his family. As the child moves into his teens, new role concepts and peer relationships influence his behavior, and the height of conflict between these and parental influences comes in grade 7. Of particular interest was Schramm's effort to cast televiewing within the child's situational context by attempting to chart such influences on his media behavior as role concept, developmental level, social class, and family and peer-group dynamics. Of great value were Schramm's discus-

sions of the implications of his findings for school instruction, and his 10 suggestions for research in relationships between television and the life of the child, with particular respect to televising effects on learning and maturing within the family group.

Hoban's (1960) discussion of recent advances in film research involved four "criteria of confidence" used to judge available film research: (a) use of reasonable intuition about research results; (b) the demonstrated competence of the researcher as a constructively imaginative observer; (c) the reliability of the research findings to a generalized theory; and (d) replication of an investigation involving a relative, rather than an absolute, constancy of the experiment. In applying these criteria to recent film research, he cited the advances made by studying the effects of color vs. black-and-white films in factual learning. Miller (1957) hypothesized a drive-cues-response-reward theory of learning which, when applied to film research, led him to the following conclusion: "Color should be an advantage if it is one of the most relevant cues or it can be used to emphasize relevant cues; it should be a disadvantage if it distracts or complicates" (p. 72).

Despite a variety of research studies, the differential and interacting roles of pictures and language in film remained to be identified and explicated, as did the role of film in contributing to the development of higher mental processes. Although people learn from films, further research is needed on ways of controlling what is learned and increasing the efficiency of learning. Audience characteristics, such as age and formal education, are pertinent to learning from film, but the amount of learning can be increased for any audience by building mechanisms, such as redundancy and participation, into the film.

The film research of the future may well be concerned with the production, uses, and effects of film within a communication system. May and Lumsdaine (1958), in the final report of the Yale Motion Picture Project, described a series of tightly designed and highly controlled experiments concerned with learning from films. No significant differences in comprehension were found among four fifth-grade classes after viewing a crude black-and-white motion picture and after viewing a highly sophisticated black-and-white film. Again, no significant differences were found among fifth-grade and ninth-grade classes in effectiveness of a color print and a black-and-white print of the same film. Significant differences, however, were found when questions were incorporated into a film. Motivating questions produced little effect, but participating questions produced a marked effect in the amount of factual learning communicated. As to the question of whether directing attention to parts of the film *David Copperfield* decreased the learning from other parts of the film, results were inconclusive. Although little attention was given to variables such as intelligence and socioeconomic status among student samples, the Yale report has considerable value as a model for experimental design in film research.

Additional References: Barrow and Westley (1959a, b); Belson (1958a, b); Berlyne (1958); Child Study (1960); Davison (1959); Fahey (1958);

Hill (1958); Hovland and Janis (1959); Kantor (1960); McLuhan (1960); Mitnick and McGinnies (1958); Noelle-Neumann (1959).

Instructional Television

Kumata and Deutschmann (1958) reviewed the findings on instructional television through April 1958 in this journal. Although the body of research findings has substantially increased, evidence is lacking regarding the varieties of learning possible from television instruction or the actual effects of such instruction on students of various ages and types. We have established that television can communicate information to some people. Few researchers apparently see any reason to research systematically the educational effects of various types of television programming on students or to experiment with ways of integrating television with other instructional tools within a classroom. Little is known of the effects of television instruction on students of varying personality structure or cognitive style. Many school systems and universities are now equipped for television instruction, but specific effects of such instruction upon the learners, the teachers, and the total system are still to be identified.

Studies of achievement, defined mainly as the retention and recall of factual information as measured by standardized tests, are now available from many sources. Perry (1960) reported a study from the National Program for the In-School Use of Television, including 14,326 students in experimental TV classes and 13,666 students in regular or control classes. Test results clearly showed that students who received part of their instruction by television in large classes did as well as (in many cases, significantly better than) students who were taught by conventional methods in small classes. Twyford (1960), reporting on the same experiment, pointed out that television groups were significantly superior to control groups.

In an evaluation of closed-circuit television instruction in Washington County, Maryland, Brish (1960) reported that more growth in science was achieved by those who had received televised science lessons than by the control groups taught without television. In addition, 71.8 percent of the pupils preferred science instruction with television and, perhaps more importantly, 92 percent of the teachers thought that pupils learned more about science when television was utilized.

A comprehensive evaluation of closed-circuit television instruction at Pennsylvania State University was conducted by Carpenter and Greenhill (1958). Comparing retention-test scores of students taught directly and by television, the investigators reported no statistically significant differences in achievement in such widely diverse courses as general chemistry, general psychology, elementary business law, elementary meteorology, introductory sociology, and music appreciation. They noted a gradual increase in the level of expressed acceptance of TV instruction by students, who frequently indicated that TV instructors prepared their materials better than the average classroom instructor.

Other studies explored the effects of televised instruction on achievement, but research designs were often inadequate, and available evidence remained contradictory. The state of educational television was the subject of a conference at Pennsylvania State University reported by Adams, Carpenter, and Smith (1958). Criteria for assessing programs were suggested, such as (a) the enduring educational value of a program; (b) its measurable educational impact, including content gain, consequence, and production techniques in relation to learning; and (c) the place of an educational television program in the curriculums of schools and colleges.

In an exploration of possibilities for maximum utilization of television in education, Frazier and Wigren (1960) suggested that a teaching-by-television project be planned jointly by a specialist in psychology of learning, a content specialist and teacher, a production specialist, a specialist in technical television, and another in research and evaluation. Varied experimentation was encouraged with an eye to stimulating independent thinking and creative expression. Programs were to be considered opportunities for learning and research rather than completely packaged lessons and were to provide for maximum involvement by the learner. The National Education Association, Department of Audio-Visual Instruction (1958) made similar suggestions. It is unfortunate that few research projects have as yet followed these guidelines.

Sherburne (1960), observing areas of educational television where further research is needed, stated that the pictorial-verbal nature of communication should be investigated. Studies should be undertaken which will provide academic description and clarification of what television can do best, and what it cannot do. Educational television may help to deal with the crisis of rapidly expanding knowledge and increasing information flow within the society. Hoban (1958) warned that educational television may not result in either unit-cost reduction or in increased instructional effectiveness. Technology alone can only partially solve educational problems.

Additional References: Albert and Meline (1958); Barrow and Westley (1958); Carpenter (1960); Deutschmann and McNelly (1958); Educational Television and Radio Center (1958); Ellery (1959); Fund for the Advancement of Education (1959); Golter (1958); Hamill and Broderick (1960); H. L. Klapper (1958); Kumata (1958); Macomber and Siegel (1958); Seibert (1958a, b, c); Seibert and Honig (1960); Westley (1958).

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CHAPTER X

Music Education

GEORGE H. KYME

WITHIN the period covered by this review, the Music Educators National Conference celebrated its golden anniversary. The first 50 years, its leaders judiciously observed, were devoted to quantity in music education; the next 50 years, they assert, must be dedicated to quality.

The contribution of research to quality in music education is evidenced by establishment in 1960 of a Society for Research in Music Education as an integral part of the MENC. At the same time research increased in quantity. Larson's (1957) bibliography covering the years 1949 through 1956 listed 2000 new titles from 75 colleges. Garrett's (1958) text on research techniques pertinent to music education was useful.

Research in History of Music Education

Johnson (1958) made an impassioned plea for research into the history of American music as a starting place for research in music education. He noted that of the 157 doctoral dissertations in musicology recorded by 1954, only 17 had dealt with music in the Americas. In these last three years music researchers have responded. The guiding light in the search for quality seemed indeed to be the light of experience.

Since 1915, when the publishing house of G. Schirmer established *The Musical Quarterly*, the successive volumes of this distinguished American journal of music have come to constitute a reservoir of information about music in the United States. Kinscella (1958) indexed this information, making the first 43 volumes a virtual encyclopedia of American music.

In summarizing the effect of Puritanism on the decline of Colonial music, Covey (1958) quoted Hoar, the clergyman president of Harvard, replying to a nephew who had requested a fiddle, thus: "Music I had almost forgot. I suspect you seek it both too soon and too much." Hoar would not go so far as to oppose music, but neither would he send a fiddle. In his view, it would take too much time from important occupations. The letter was dated 1661.

Loessel (1959) described the nineteenth-century unorthodox notations used in the reading of music in the northern part of the United States and indicated the rationale of their use and abandonment.

The contributions of Elam Ives and those of the Mendelssohn Quintet Society, to mention but two, were historically reviewed by John (1960) and Phelps (1960). Musicology in the area of American studies, it would seem, fulfills its highest requirements when approached in a spirit of interpretative scholarship and not as a system of historical bookkeeping.

Additional References: Baxter (1960); Fowells (1959); Monsour (1960); Montague (1959); Orland (1959).

Philosophical Research in Music Education

For the present purpose, philosophy is regarded as research when its methods of inquiry are critical and objective and when the results are accepted as organized knowledge by a consensus of trained investigators. *Basic Concepts in Music Education*, the fifty-seventh yearbook of the National Society for the Study of Education (1958), prepared by a committee with Madison as chairman, was probably the most significant philosophical contribution to music education during the period covered. Section I interprets the implications of fundamental concepts in current educational theory, and Section II contrasts actual practices with these theories. Typical of the unresolved conflicts is this concept of McMurray (1958): "To realize the aims of general education in music we cannot rely upon instruction in performance skills per se, as a means to full understanding of musical content. To teach sensitivity to esthetic content, we must rely upon other educational experiences than those of performance" (p. 46-47). There was no immediate answer on the part of the practicing musicians, though Falkner (1957) had observed that people recognized as leaders in music circles (organizers of concert series, purchasers of records and music) were those who had received intensive instruction on instruments in high school.

The theory of consonance and simple proportional lengths of strings, that is, the "chord of nature," was critically examined by Cazden (1959), who concluded that, although simple number ratios may be taken as expressions of certain definite physical properties of musical tones, they may or may not serve as an explanation of musical consonance.

Tischler (1959) presented arguments against spending time on peripheral matters in the teaching of music appreciation. Recommending less time on biography, less playing of instruments, and even less writing of original music, he argued against organizing courses according to single principles—such as the historical approach or devotion to a particular style.

Lundin (1960) reviewed reinforcement theories in learning—the basis of various teaching machines now in vogue. His application, however, was to the teacher of music.

Additional Reference: Abel (1957).

Teacher Training

Rightly, research in music aimed at improving instruction should concern itself with the fountainhead of music education, the music teacher. The consensus suggests a trend toward a more liberal, broad-field education of music teachers as contrasted with the professional-performance oriented preparation revered only a decade ago.

From a 10-year follow-up study of 81 graduates of a single teacher-training institution, Turner (1959) concluded that sufficient emphasis had been placed on the preparation of teachers to perform. What he believed needed was greater attention to teaching music skills and aesthetics.

Clarke (1958) found such broader preparation in student teaching. Most of the 42 teacher-training institutions in his survey required instruction in both vocal and instrumental areas. Eighty-five percent required further student teaching in the student's teaching minor. In most institutions student teachers met music classes on the elementary, junior-high-school, and senior-high-school levels, pupils being drawn from differing economic strata and including slow and fast learners.

Formwalt deVermond (1959), in a study of the relationship of piano-training ability to the carrying on of classroom music activities, found that 70 percent of her 205 subjects had received some piano training and that 90 percent believed piano training helpful in carrying on musical activities. Using self-evaluation of over-all ability and enjoyment of singing as criteria, significant differences were found between players and non-players.

Hertz (1959) used principals' ratings of 157 first-year teachers to question the practice of allowing a free selection of majors and minors by students preparing to teach on the elementary level. The major and minor field preparation for secondary-school teachers, for example, was not satisfactory for elementary-school teachers.

A high degree of agreement among college personnel, supervisors, voice teachers, and instrumental teachers as to important guidance practices in music-teacher education was found by Genge (1959). Among recommended criteria were pre-admission testing, successful participation in music groups prior to college entrance, solo and ensemble experience, and leadership experiences.

Henderson (1959) summarized the results of a normative survey dealing with trends in the administration of music in the public schools. Overcrowding and expansion of the secondary-school curriculum brings about scheduling of credit courses in music outside regular school hours and promotion of elementary-school music programs. Henderson saw a trend toward reduction of authority of the musical director. He found pupil achievement in music in small school systems significantly related to the nature of administration, whereas in large cities no significant relationship appeared between these factors.

Additional References: Dyrud (1959); Evans (1958).

Curriculum

Results of experimentation directed toward bettering instruction have long been treated as though they were "trade secrets" by most successful music teachers. One of the evidences of maturity of the profession is the willingness to share research findings in this important area.

Johnson (1960) found significantly greater gains in vocal range, musical knowledge, and attitude toward music among experimental groups of junior-high-school boys taught in all-male classes as compared to control groups including both boys and girls. The value of separation accountable to the special needs of the boy's changing voice was not reflected in a separated group of girls.

Evidence that elementary-school music teachers may have consistently underestimated the potential of their students was given by Pepinsky (1959), who found children to be capable of understanding the music of Gluck, Handel, and Wagner. Blyler (1960) found that, contrary to the emphasis currently given to folk music in elementary texts, elementary-school children preferred composed songs to folk songs, though words were important in making choices. Dominy (1958) studied the appropriateness of textbooks for achieving the aims of music education in the elementary school, and concluded that the apparent major purpose of the several music series which she examined was the development of skill in reading vocal music in regular form. These textbooks followed the attainment standards outlined in the 1921 courses of study for music.

In an effort to identify the differences between children of average musical ability and children gifted musically as they engaged in music-reading activities, Petzold (1960) found (although his 15-minute learning sessions were not long enough for most subjects to learn to read the material) no difference for either of the two groups between subjects who had at least one year of instrumental training and subjects with no such training. Similarly, there was no difference between grades 4 and 6.

Kyme (1960), using "shape notes" as a crutch to teach the vocabulary of so-fa syllables, found some justification for this historical music-reading aid. The shape notes provided for the accurate naming of the so-fa syllables coincidental with the pitches involved, thus offering the ingredients essential for a "conditioned response."

Studying singing of adolescent boys, Swanson (1959) found that, when they were grouped according to sexual maturity, the experimental group surpassed an equated control group in gains in vocal range, in musical knowledge, and, more importantly, in attitude toward music. Swanson separated his more mature boys from the girls, but boys in his third level (O on the Davenport scale) were assigned to the same sections as girl classmates.

Hohn (1959), analyzing with a sound spectrograph the representative Italian vowel sounds as sung by six baritones and six tenors, found significant changes in format frequencies on all vowels, especially between the highest and the middle pitch. Tenor vowels were more open and bright. A jury of trained phoneticians showed considerably greater agreement on which vowel was being sung on the lower pitches than on the highest.

Weigand (1959) compared two methods of teaching general music in the junior high school, both of which were based on organization of activities and materials into broad units of instruction, and concluded that

effective teaching could take place whether or not the materials were organized into resource units. Only in two of the three experimental situations did instruction so organized produce higher test results than those of the control group. The *Gaston Test of Musicality* and the *Farnum Music Notation Test* were the instruments used in evaluation.

Cramer (1958), studying the relation of maturation to achievement in beginning instrumental music, found that success was significantly influenced by motor development, though not by physical growth. Grade 7 appeared to offer optimum maturational conditions for beginning instrumental study.

Two investigations, LaBach's (1960) on the effect of background music on reading comprehension and Kopp's (1958) on the effect of stimulating and relaxing music on children taking arithmetic tests, showed that music does not distract and that the use of background music over a long period of time may be a way to build sound aesthetic values in music.

Hare (1959) contended that a sensory response to music is basic to music appreciation and called for an awareness of a student's likes and dislikes as well as an awareness of which elements of music he responds to. Hare's study supported belief that development of musical taste and appreciation is related to musical knowledge and the aptitude to distinguish musical qualities.

Cahn (1960) observed that, whereas junior-college students are principally concerned with music which satisfies their existing levels of understanding, teachers are more concerned with music designed to raise the students' level of understanding. Both Hare and Cahn provided for progress from the familiar to the unfamiliar; however, Cahn approved the use of devices which present musical concepts by relating them to sensory experiences such as sight and shape and movement. These, Cahn found, offer an opportunity to minimize obstacles in terminology and thus deal directly with musical values.

An excellent bibliography of music-education materials which was published as a complete issue of the *Journal of Research in Music Education* was assembled by Beach and others (1959).

Additional References: Keiser (1957); Mull (1957); Warmack (1960).

Psychological Studies in Music

Little investigation was done in music aptitude testing. Wheeler (1959) devised a test comprising pitch discrimination, estimation of time value, and musical memory. He reported a correlation of .71 with the Seashore tests.

Edwin Gordon (1958) sought to determine whether scores on the Drake musical aptitude tests are affected by training and practice. Of 29 ninth-grade subjects, five of the high-scoring and five of the low-scoring were given training. The remainder were treated as a control group. Both the

control and the experimental group made statistically significant gains when retested with the musical-memory test.

An acoustical analysis by Lanier (1960) of tones produced by clarinets constructed of various materials yielded differences discernible to machines but not recognizable by the ear. A study by Mason (1960) of the intonation with which woodwind players typically play gave no support to the belief that fine ensemble players tend to play to the Pythagorean tuning. They were merely playing "out of tune."

In a quantitative study of dynamics in musical performance Erwin Gordon (1960) found that bands rated highest in music festivals play fortissimos very loudly and pianissimos consistently softly. Perhaps *appropriateness* is the explanation, for Gordon's charts showed that the band receiving the lowest rating employed the *widest* dynamic range of all the bands, though its practice was quite erratic.

Additional References: Harris (1958); Neely (1959); Sears (1960).

Needed Research

Although this chapter cites a number of doctoral dissertations, increasingly large numbers of music educators are assuming responsibility for research. Among areas still needing the attention of these researchers are (a) evaluation of contrasting methods of teaching, (b) effectiveness of the music program in developing aesthetic judgments, (c) grade placement of the several aspects of music education, and (d) factors contributing to musical achievement. These areas are in the province of the practicing music educator. He best can bring to bear the insights and designs for research.

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CHAPTER XI

Art Education

REID HASTIE and STANLEY G. WOLD

IN THIS survey of formal research related to art education, selected studies are grouped under three main headings which emphasize recent directions: Theoretical Foundations, Teaching and Learning in Art, and Measurement and Prediction. The key studies reported in each section are examined from the standpoint of sampling, design, treatment of data, and logical derivation of conclusions.

Theoretical Foundations

Using the results from 15 paper-and-pencil tests and 3 performance tasks given to 50 students in art education and art, Brittain and Beittel (1960) reported analyses of levels of creative performances in the visual arts. Products were rated for quality of expression. Intensive examination of the products within each of three categories (high, middle, and low performance) identified art characteristics typical of each level. Inferences were made about motivations and mental processes differentiating among individuals at the different levels. Although certain speculations reveal the bias of the investigators' position, the study involved important objectives and employed a high standard of investigative procedure.

An exploratory study by Hammer (1960) of the personalities of artistically gifted high-school students suggested a method by which the complex pattern in the creative expression of adolescents and the personality make-up of the artist can be studied. A battery of projective measures was administered to 18 adolescent painters. Independently of this, each student was put into one of three categories: (a) merely facile, (b) in between, and (c) truly creative, on the basis of his performance during a workshop. The two extreme groups ($N=5$) were compared for differentiating personality characteristics. The analysis of test data disclosed a high degree of similarity in personality patterns *within* groups and striking differences *between* the two extreme groups. The small size of the samples made definite conclusions unwarranted.

Hudson's (1960) cross-cultural study of the perception of pictorial space among various groups in the Union of South Africa served as a strong reminder that social influences on aesthetic phenomena should not be ignored in American research. The study led Hudson to conclude that formal schooling and informal training combined to establish an exposure threshold necessary for the development of ability to perceive pictorial space by means of conventional cues.

Comalli (1960) studied perception of real and apparent motion. He concluded that pictured objects having directional dynamics more potently

affected the perception of both autokinetic and real motion among the artists than among the scientists studied.

Additional References: Barry (1957); Burns (1959); Eiduson (1958); Guilford and Smith (1959); Honkavaara (1958); Knapp, Brimner, and White (1959); Kollmeyer (1958); Lewis (1959); Montgomery (1959); Riffenburgh (1959); Robinault (1958); Scholtz (1958); Tatton (1959); Torrance and others (1959-60); Wall (1959); Wallach and Gahm (1960).

Teaching and Learning in Art

Art education has set as one of its major goals the promotion of creativeness. In testing the appropriateness of this goal, Mainz (1960) attempted to determine the effect of instruction on attributes of creativity. Groups composed of persons majoring in elementary education were given a battery of nine tests before and after completion of regular college classes in art education ($N=77$) and industrial arts ($N=90$). A method of teaching which had as its major goal the promotion of creativity effected a measurable increase in the student's general creativeness. In each case the group taking a one-semester course in art education showed significantly greater gains in general creativity measures and on the test for aesthetic appreciation than those in the industrial-arts course, who dropped below pre-test achievement on part of the test battery. More sophisticated investigative procedures should be applied to other groups and disciplines: for example, Hoyt and others (1952) and Dougherty (1959).

Detailed examples of good teaching of art in the elementary schools were analyzed by Barkan (1960) to identify the underlying theory. After careful screening, 18 outstanding teachers from nine school districts were selected. Tape recordings of classroom proceedings and photographs were subjected to analysis to determine how each teacher internalized theory of good teaching of art into his personality and hence into classroom behavior. This is an important pilot study from which other investigations can proceed.

Wilding (1960) investigated art education in high school as it affects the home and family living. Forty art teachers were selected at random in Los Angeles County. By means of questionnaires, the teachers were divided into high and low groups according to the extent of orientation of teaching toward the home and family living. One hundred students of teachers in each group were randomly selected and given a questionnaire. Wilding stated that (a) very little of the secondary-school art program was oriented toward the home and family living, (b) those art courses oriented toward the home and living in a family had greater effect on the home situation than other art courses, and (c) greater improvement tended to take place in the appearance of the home and in family relationships as a result of increased art activity in the home.

Mitchell (1959) studied the relationship between attitudes about art experience as expressed by college students who were majoring in elemen-

tary education and their behavior in art activity as indicated by a series of their art works. Analyses of the data showed no significant relationship between what a student said and how he performed in art activities. Although Mitchell concluded that teachers cannot predict how students will perform in art activities on the basis of verbal understandings they appear to demonstrate, more studies are needed to verify these findings.

The usual investigation of children's color choices was carried a step further by Schwartz (1960), who studied the effects of conditioning upon those choices. Through conditioning, significant differences were produced in color preference in selection situations and in object drawings among groups randomly selected from 69 children in grade 2. The conditioning had some slight effect on use of color in art expression and no effect on quality of pictorial expression. It was concluded that preferences for colors are probably acquired responses based on emotional experience and can be modified.

A program of research directed by Wiggin (1959) attempted to develop an instrument that would predict the degree of acceptance by mentally retarded students for any new art activity. A list of art activities rated most successful in special class situations was compiled. These activities were examined to determine their common characteristics. A "yardstick" was developed to differentiate among art activities in terms of relative value for mentally retarded children and to give a predictive rating for future selections of art experiences for a special class curriculum. Further study of this yardstick is merited.

Additional References: Andrus (1958); Burkhart (1959); Freundlich (1960); Kruk (1959); Lansing (1959); Lienard (1959); McFee (1959); Micheal (1959).

Measurement and Prediction

Studying the problem of specific assessment of art aptitude and ability, Gutekunst (1959) conducted a comprehensive study of the predictive validity of nine standardized tests in two groups of college students majoring in art education at one institution. The first group consisted of 80 students stratified by class level and as high or low achievers in art; the second group consisted of 73 freshmen. The criterion was average achievement in a variety of activities in typical college art courses. In the second group, scores on the well-known *Meier Art Judgement Test* and *Graves Design Judgment Test* were not significantly related to criterion scores. However, the *Knauber Art Ability Test*, sometimes regarded as outmoded, showed a significant correlation (.47) with art achievement. The *Kohs Block Design Test* and the *Survey of Object Visualization* correlated .56 and .48, respectively, with the criterion. Their efficacy points out the importance of spatial-relations abilities in art. The six most effective predictors yielded a multiple correlation of .62 with art achievement. While not high, this index is promising, considering the restricted range of the population studied.

A factor-analysis study of the scores of 100 university students on 16 tests of spatial-relations abilities was made by Hall (1960). Important among the six factors extracted were the abilities to distinguish outlines of like and unlike forms when one form was rotated or reflected and to distinguish between like and unlike forms when interior parts were differently oriented spatially.

Wold (1960) studied the predictive validity of the *Graves Design Judgment Test* in a sample of 128 college elementary-education students. Two performance and two judgment criterion measures were developed to reveal specific aspects of the functioning of the Graves test. One performance and one judgment criterion emphasized sensitivity to art structure, as the Graves test is purported to do. The remaining two criteria emphasized qualities of personal expression. The Graves test correlated .18 (significant at .05) with the judgment measure stressing art structure and the personal-expression production task. Other correlations of test and criteria were not significant. The relationship with the judgment measure was associated with amount of previous art experience and academic aptitude. Wold concluded that the *Graves Design Judgment Test* has too slight validity in predicting performance in varied art tasks to be recommended as a measure of general art aptitude. In the same report, evidence was presented to support the conclusion that different art tasks require substantially different abilities.

A scoring key on the *Strong Vocational Interest Blank* for male elementary and secondary art teachers was developed by Croftchik (1959). The key was designed on the basis of data from 335 art teachers in Illinois, Michigan, and Missouri and was cross-validated on an independent sample of 93 art teachers. Croftchik found that the key provided definite differentiation.

Additional References: Holland (1959); Smith (1960); Waggoner (1959).

Summary

There has been a most promising effort on the part of art educators to use appropriate research tools and stringent research design in carrying out their investigations. Factors to be studied have been more clearly defined, through both empirical and rational means, and new techniques have been applied to their analysis. Renewed efforts have been made to refine methods of measuring the qualitative aspect of the art product or art experience.

The literature reveals increased interest in the personality of "the creator" and in art products as a means of studying personality characteristics in general. This utilization of visual materials, including both the works of mature artists and the graphic expressions of children, has brought both specialists in art education and psychologists face to face with important problems.

In the assessment of the attributes of art ability, the most striking development has been the assignment of added value to spatial-relations abilities for success in art.

Research in art education, in general, has shown more concern with art as a process. The many studies of creativity and those dealing with the thoughts, attitudes, and behavior of subjects in art situations are evidence of this. The accent has been on art as a personal experience rather than on art as a social activity; not art and society, but art and the individual.

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